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THE EVILS OF MARRIAGE AND PREGNANCY IN WOMEN WHO DO NOT POSSESS SOUND PELVIC ORGANS.

The Presidential Address, delivered on October 14th, 1896, at the opening of the 23rd Session of the Bristol Medico-Chirurgical Society.

BY

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IN the first place I wish to thank you for electing me your President for the ensuing year. I regard this as a double honour, being not only a compliment to myself personally, but also to the Hospital on the staff of which I have been for nearly twenty-two years.

In selecting a subject on which to address you to-night, I have chosen one which I trust will be of general interest and at the same time enable me to bring before you some of my own special work. I wish briefly to consider the evils of marriage and pregnancy in women who do not possess sound pelvic organs.

In the first place we have to consider the effect of marriage only, and secondly that of pregnancy occurring in these women.

This is the day of preventive medicine, and although I do not expect for one moment that medical men will ever have the power to veto the marriage of people, yet I am sure it is our duty to instruct the mothers of girls that there are much greater evils for them than remaining "old maids." If the family doctor would only warn these unsound people against marriage there would be far less misery in the world than there is. The fact is, there are numbers of women who marry and yet are absolutely unable to lead a married life and can never become pregnant, and there are also a large number to whom pregnancy means a very great risk indeed.

The chief point I wish to emphasise is, that no woman whose menstrual functions are not performed normally should marry unless she has had a doctor's consent and it has been considered that neither marriage nor pregnancy will intensify her trouble. Marriage has been a very common prescription for neurotic and hysterical women, without the slightest attempt being made to ascertain whether there is any real pelvic trouble to cause the symptoms complained of.

I have notes of a large number of cases where marriage has been the cause of intense suffering both bodily and mental, and in all these cases a properly conducted examination would have revealed the absolute necessity of forbidding marriage. We all have seen cases where a life-long misery for two people might have been avoided if only a doctor had been consulted on this very important step in life. Frequently the family doctor is asked whether a certain woman might marry, and he interrogates every organ except those which have to bear the brunt of married life, and he passes women as sound who are sound practically for all purposes save that of marriage. I have had some amusing cases of elderly females who have passed the climacteric asking me if they might marry. I have generally said "yes" provided that, as in life insurance policies, the "age is admitted."

What has struck me as so peculiar is, that women who suspect that they are wrong in the pelvic region will not consult a doctor as to whether they may marry or not, and they resent any opinion given that they are not as other women.

Only very recently in the Hospital I told a woman who had no vagina, uterus or appendages that she was not a fit or proper person to marry, and yet in spite of this opinion she did marry.

The first set of cases I wish to allude to is a very common one and productive of the greatest misery. I allude to women marrying who have had such an attack of pelvic inflammation as to leave the pelvic organs matted together and fixed. I might mention here that measles and scarlet fever in adult women are common causes of this form of pelvic inflammation. I have been consulted frequently by women on account of painful menstruation which has only been set up since an attack of measles or scarlet fever, and I have invariably found in these people evidence of pelvic disorder, most frequently fixation of one or other uterine appendage. If such a woman marries she lights up again the old mischief. She has intense dyspareunia: this term, coined by Dr. Robert Barnes, signifies painful performance of the marriage act, and as he says, "however disagreeable the topic may be, it is impossible to escape reference to a function so important." If she becomes pregnant she frequently aborts. I have seen a large number of these women, some *before* marriage, have warned them (without any avail) not to marry, and have seen them *after* marriage when they were made very much worse. I have also seen these cases for the first time after marriage, and from the previous history have been convinced that there was mischief prior to marriage which had been made worse since.

At this stage let me protest against the man being always made the scapegoat for these inflammatory attacks. I am well aware that a latent gonorrhœa or gleet does often set up a train of symptoms like those described, and I have seen cases where, from the clinical history prior to marriage, I am sure the woman was healthy and that the symptoms were due to infection from the husband; and here I must ask those gentlemen who look after the men to bear in mind that there are certain men who ought not to marry, as they would be a distinct source of danger to their prospective wives.

In the present day it is the fashion to regard pelvic inflammatory attacks occurring in young married women to

be the result of infection from the husband. My own cases do not bear out this to anything like the extent that is commonly supposed. It is difficult to get the history of the young wife's ailments prior to marriage, and her mother will resent any idea that she, the daughter, was not perfect in every respect, and in proportion as she knows she was not, so she blames the non-erring husband. Of course he is indirectly the cause of the old mischief lighting up, but he is blameless in the matter. My experience is, that it is a common practice for mothers to make light of pelvic disorders in their daughters, and if mischief happens after marriage to throw the whole blame on the husband. Mothers ought to take a common-sense view of this question, and if their daughters' menstrual history is not normal then the family doctor should be consulted. An examination of the pelvic organs sufficient for all purposes that I now advocate can be made through the rectum and abdominal wall, and I consider it ought to be made in all doubtful cases. I am convinced that marriage would not be thought of in a large number of the cases if the doctor consulted would just let the mother and the daughter know of all the evil effects likely to ensue from marriage. Of course there are many pelvic states which produce painful menstruation, some of which would not interfere with marriage, but without a pelvic examination it is impossible to differentiate them.

I now take another set of cases where the effect of marriage is not as a rule to intensify the condition that is abnormal, but sterility or repeated abortions are common and parturition is increased in its danger.

I allude to cases of fibro-myoma of the uterus. In a certain proportion of these cases there are no symptoms whatever to lead the woman to suppose that anything is wrong, and it is only after some years of married life that she consults a doctor and finds that she is not likely to become pregnant. In these cases there is no dyspareunia, and except for the sterility the conditions of married life are normal.

I have no remedy to suggest for these cases; although if a man married a woman so affected with the idea of having an heir to his title and estate, it certainly would be highly

disappointing for him to be told subsequent to his marriage that his wife in all probability would be childless, and I do not see how we can help him unless he stipulated as a condition of his marriage that his prospective wife should produce a certificate of normality. I do not think we have quite arrived at this stage of affairs at present, whether in the future we shall have help from legislation on this point I cannot say.

In another set of these fibroid cases decided symptoms are produced, and I consider that these women ought not to marry: the menorrhagia and dysmenorrhœa are both increased by married life, and if pregnancy takes place abortion is very liable to ensue. There are however a certain number of fibroid cases where pregnancy occurs and goes on to its normal termination, a living child being born. I have attended nine women in their confinements who had large uterine fibromyomata. One case I attended three times and one four times. All of these cases did well, and in one of them the result of repeated pregnancies was to cause total disappearance of the tumour of the uterus. The history was most instructive: at each pregnancy the uterine tumour increased in size; but during the involution of the uterus the tumour also underwent involution, reducing it considerably. Six months after the termination of the fourth pregnancy the tumour had entirely disappeared. Now, although this woman was cured of her uterine tumour by repeated pregnancies, I do not advocate this mode of treatment, and I should advise against marriage in any case of fibroid tumour of the uterus where the usual symptoms of that condition were present.

Where the fibroid tumour produces no symptoms and the contracting parties are made aware of the probability of a sterile life, then I see no reason to negative marriage. Each of these cases must be treated on its own merits, and we must bear in mind that the condition and position of the growth in the uterine wall may vary with time. I had under my care for some five years a patient with the growth in such a position as to cause profuse hemorrhage at the periods. By degrees this growth moved towards the peritoneal surface of the uterus, with the result of allowing the uterine mucosa to become healthy: the

woman then conceived, and would have gone to her full time; but not knowing she was pregnant, I passed a sound into her uterus and produced an abortion. This case was very instructive, as the woman had regular monthly bleedings, no symptom of pregnancy, and a hard fibroid cervix; but she had two abdominal tumours at this visit, whereas six months before she had only one, and that one I had known of for years. Here the fibroid condition of the uterus masked the symptoms, and I suspected a second outgrowth from her uterus or possibly an ovarian cystoma. The mistake I made was, in not using the stethoscope over the new tumour; for if I had I should have heard the fœtal heart, and then possibly I should have done on purpose what I did by accident, as the fibroid growth interfered with the uterus maintaining its normal axis in the pelvis, and I have no doubt that the induction of an abortion was less risky than letting her go on to her full time.

There is no doubt that pregnancy complicated with a fibroid tumour of the uterus is a very much more risky affair than under ordinary circumstances. We have, in addition to the mechanical obstacle often offered by the fibroid, to deal with a phase in the life-history of these growths which is most important to bear in mind, and that is their tendency to necrose if their nutrition is interfered with.

This is a feature that all of us who have to treat these cases must always bear in mind. I have seen several women nearly die from septic changes occurring in the uterine tumour itself, due to its nutrition being interfered with in labour and sometimes due to direct injury in the confinement. I am sure the great point in managing a midwifery case complicated with a fibroid uterus is, not to let the uterus become tired out, for if you do you will be sure to have to face a bad attack of *post-partum* hemorrhage: we all know how prone a tired uterus is to bleed under normal circumstances, and it is infinitely more so when it is the seat of a fibroid tumour which interferes with the mechanism of complete contraction and retraction of the uterine wall; besides, in these fibroid cases you do not get the assistance from ergotin injections and the hot water douching, for the simple reason that the arrangement of the muscular

fibres of the uterus is interfered with to a certain extent by the presence of the fibroid growth. Bearing this in mind, always have at hand perchloride of iron to produce a mechanical stasis, when you are no longer able to obtain the normal physiological process necessary for the arrest of hemorrhage.

The other evil of long continued uterine action is the direct interference with the nutrition of the fibroid growth, and that this is no imaginary danger I can prove by several cases of sloughing of the fibroids *post partum*, as well as the production of a low form of septicæmia which is exceedingly difficult to treat and may require removal of the whole uterus to save the life of the patient. In all the cases I attended I cut short the labour as much as possible, and in all the fourteen labours I did not have any complications. The early use of the forceps is indicated in these cases if the vertex present, and manual assistance at an early date in other presentations.

The question of malignant disease of the uterus rarely complicates my subject, as it is not common at the ordinary age of marriage, and when present would of course be recognised as a distinct bar to marriage. There are cases of malignant disease of the uterus where the main symptom of increased loss of blood at the catamenial periods has been put down to other causes, and women have married not knowing their condition and have become pregnant, this latter state being an exceedingly grave complication. Yet if the point I contend for be granted, these cases ought to be recognised and marriage interdicted. We all know how patients with cancer of the uterus go on for a long time without seeing a doctor, but then as a rule the women are either married or spinsters with no idea of marriage. The early stages and history of malignant disease are pretty well known to medical men and should be attended to, and any woman contemplating marriage with such suspicious symptoms must be examined with the view of ascertaining what her real state is; and if the condition is suspicious, then a given time should be allowed to elapse to enable the doctor to say positively what the disease is.

There are other pelvic conditions which I think should absolutely bar marriage, and one is such deformity of the

pelvis that no living child can be born. Of course it is very easy to say that an abdominal section can be done and the child saved, but this mode of delivery is more serious to the mother than an ordinary labour, and if she cannot bring forth her child in the natural way she should stand aside and let a more fortunate sister have her chance. Most of the women I have seen with such a deformed pelvis have become pregnant without going through the formality of marriage, and so no one had the opportunity of advising against it. I do not think that in the better classes a woman with such deformity of the pelvis would think of getting married; and if she did, would most likely consult a doctor before she took such a step, and then the question of pregnancy must be faced.

I now come to consider very briefly the remaining cases. No woman ought to marry with an ovarian tumour or broad ligament cyst, as the dangers of pregnancy are no doubt greatly increased. I do not think we are likely to have to give an opinion on the marriage question here: of course, if we did we must say that, until the operation for the removal of the tumour has been performed and we know what the state of the pelvic organs is after the operation, we cannot advise for or against marriage.

Several women from whom I have removed one ovary for cystic disease have married and had children, and there has been no loss of sexual capacity. Again, in some of my cases in which I have removed both ovaries in married women there has been no loss of sexual power: this fact is important in deciding whether a woman from whom both ovaries have been removed is pretty much in the same position as a woman who has ceased menstruating at the ordinary time of life. The very few cases I have seen have certainly led me to give the opinion that the only difference will be that there will be "no family," and that otherwise there is no reason to negative marriage. The various forms of tubal disease most frequently cause alterations in the menstrual life, producing pain and excessive hemorrhage, and if my advice is acted on the pelvic examination will reveal the disease and marriage must be vetoed.

There are many conditions which interfere with the due

performance of the marriage contract, but most of them are brought to our notice after marriage and can be remedied. The great point is, to prevent women marrying in ignorance of such a condition as cannot be remedied but only made worse by marriage.

I have purposely limited this address to the evils of women marrying with pelvic abnormalities. I cannot this evening go into a subject that I have given much attention to, viz., the influence of pregnancy in chronic and acute diseases. There is no doubt but that there are several chronic diseases that ought to act as a bar to marriage, some on account of the woman herself and some on account of her offspring, but this subject I cannot discuss now; nor can I open up the important subject of the effect of pregnancy in acute diseases, a subject of great importance and one that I had the opportunity of working at in my earlier years of practice when I did a good deal of general work.

My object to-night is to bring before you what I consider to be a very great evil, and ask you to help to limit it as much as possible. I must apologise for incorporating such a poetical subject as marriage into the dull prose of a medical address.

A CASE OF DOUBLE SPASMODIC TORTICOLLIS: EXCISION OF BOTH SPINAL ACCESSORY NERVES.

BY

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Dr. Maurice H. Richardson and Dr. George L. Walton, in an excellent paper[1] on the operative treatment of spasmodic torticollis, give the following summary of conclusions:—

1. Palliative treatment, whether by drugs, apparatus, or electricity, will rarely prove successful in well-established spasmodic torticollis.

[1] *Am. J. M. Sc.*, 1895, cix. 27.

2. Massage may prove of value in comparatively recent cases.

3. Resection affords practically the only rational remedy.

4. Operation on the spinal accessory nerve may afford relief, even if other muscles than the sterno-cleido-mastoid are affected. On the other hand, the affection previously limited to the sterno-cleido-mastoid may spread to other muscles, in spite of this operation.

5. No fear of disabling paralysis need deter us from recommending operation, as the head can be held erect even after the most extensive resection.

6. The most common combination of spasm is that involving the sterno-mastoid on one side and the posterior rotators on the other, the head being held in the position of sterno-mastoid spasm with the addition of retraction through the greater power of the posterior rotators.

7. It seems advisable in most cases to give preference to the resection of the spinal accessory as the preliminary procedure.

The following case is an extreme illustration of this intractable disorder, and it was not likely that any kind of surgical interference would subdue a long-standing habit of twenty years. Nevertheless the result, although not as successful as one hoped for, more than justifies the operative measures adopted :—

J. P., aged 30, single, a collier, living at Aberbeeg, Mon., was admitted to the Bristol Royal Infirmary on January 27, 1896, in consequence of long-continued muscular spasms of the head and limbs.

Family History.—His father died at 59 from chronic bronchitis. His mother is alive and in good health. Four brothers and three sisters are well, with no evidence of rheumatism in family.

Personal History.—He was a healthy boy up to the age of 10. When at school his head was twisted forcibly towards the left shoulder, and then became fixed. When he tried to get the head straight he was unable to do so, and it remained in this position, drawn to left side, for some months. Six months afterwards he had scarlet fever, was seriously ill, and lost his voice, which has never quite regained the normal. One month after the onset of the attack he began to have some kind of tremor, but the stiffness of the neck was the only thing present up to the time of the fever. These spasms, tremors, and involuntary movements of various kinds have continued with varying severity ever since, and have always caused him some difficulty in walking. His speech has been affected at times, and he has been unable to speak at all for two or three hours together, but he has not been absolutely laid up, and he has always been able to dress and feed himself without assist-

ance. There is no history of any specific disease, and there is no evidence of anything of the kind. During the last twelve months the spasmodic movements have been getting worse, and the difficulty in walking has increased.

On admission patient has the appearance of a well-nourished man, of short stature—5 ft. 6 in.—but of great muscular development, weighing ten stone. His general health appears to be good, but he cannot control his hypertrophied muscles, and hence he is not able to stand still, but his head and arms are subject to oft-repeated involuntary muscular spasms, somewhat of a choreic type, and the arm movements simulate those of athetosis. Whilst sitting quietly these movements are not active, but when he gets excited, and more particularly when he walks, the arms and head are thrown into a condition of involuntary spasm involving a great number of muscles, distributed equally on both sides, but acting intermittingly, although more slowly than the ordinary movements of chorea. As regards the head, the movement simulates that of spasmodic torticollis, first of one side and then of the other, then of both, the head being strongly flexed on the chest and then drawn back by the posterior cervical muscles. At the same time one or the other shoulder is drawn up, and the head drawn over to one side or the other.

When lying quietly in bed the head is fairly still, and the movements cease entirely during sleep.

The most striking feature in the movement is the powerful contraction of the sterno-mastoids and trapezii, and at the same time the platysma myoides is seen to stand out strongly.

All the muscles concerned in the movements are greatly hypertrophied; the sterno-mastoids appear to be two or three times their normal size, and hence the neck was found to measure 16½ inches in circumference. The hypertrophy is not limited to the neck; the thoracic and abdominal muscles stand out remarkably, with very well defined transverse lines. Sometimes, when violent attacks of spasm come on, the patient feels some difficulty in breathing. The muscles of arms and forearms are also in excess, but the dynamometer does not show any great increase in power, the left hand giving a pressure of 75 pounds, whilst the right gives 100. Of the facial muscles the occipito-frontalis is often strongly affected, but the tongue is normal. The patient states that the violent spasms commence at the abdomen, the wall of the abdomen becoming like a board, whilst the spasm passes upwards to the head and neck. Walking is accomplished with some difficulty. He struggles forwards "as if against a strong force holding him back," but when he walks backwards there is no such difficulty, as the spasm is less.

Fibrillary movements are visible in some muscles, different strands of fibres acting more or less independently. There are no sensory defects. The reflexes are not remarkably abnormal, but the superficial are ill-marked, the cremasteric and abdominal being absent. The knee-jerk is in excess on the right side, but there is no ankle- or rectus-clonus. The electrical reactions, motor and sensory, are quite normal: the optic discs are normal, and there is no evidence of any eye defect.

This patient's symptoms were so obviously beyond the range of medicinal treatment that little was done in this way. The only drug found to be useful was hyoscine hydrobromate, which not only gave a good night but appeared to diminish the violence of the movements during the day following. Arsenic, belladonna, and Calabar bean were given in increasing doses, but without favourable result.

After repeated consultations with my surgical colleague, Mr. W. H.

Harsant, and as it seemed clear to us that nothing short of the most decided surgical interference gave any prospect of improvement, it was decided that excision of both spinal accessory nerves should be performed, and this was done by Mr. Harsant on the first of

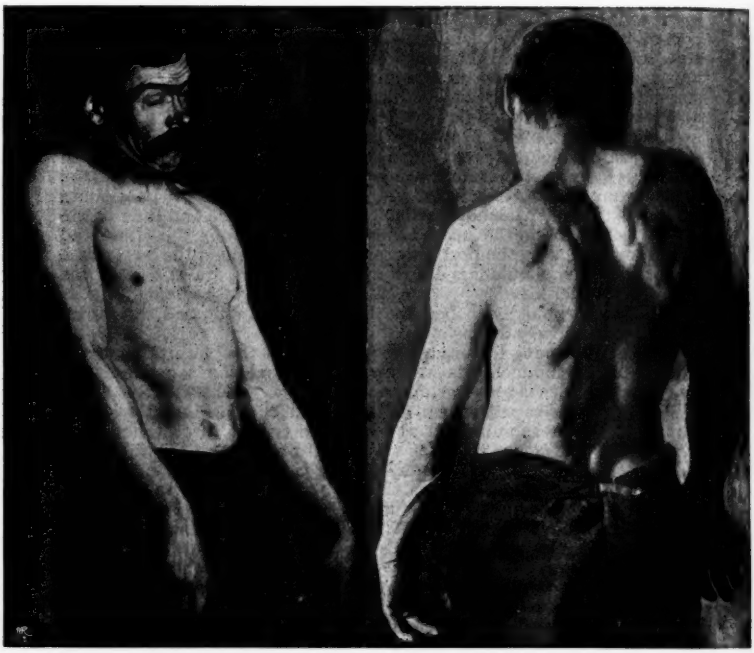

FIG. I. FIG. II.

[Figs. I. and II. show fairly characteristic positions of the patient previous to operation. It will be seen that the head is firmly fixed with both sterno-mastoid muscles in rigid spasm, and that the platysma is also in violent contraction. The occipito-frontalis and orbicularis palpebrarum are also in action. The arms are rigid, and the abdominal recti are in powerful action.

Fig. II. shows also the elevation of the shoulder and the lateral bending of the head. It also shows the great development of the erector spinæ and the other dorsal muscles.]

April. Gas and ether having been given, all the involuntary spasmodic movements ceased, and the head assumed the normal position. The neck having previously been wrapped round with carbolic pads, and afterwards washed with perchloride of mercury solution, an incision

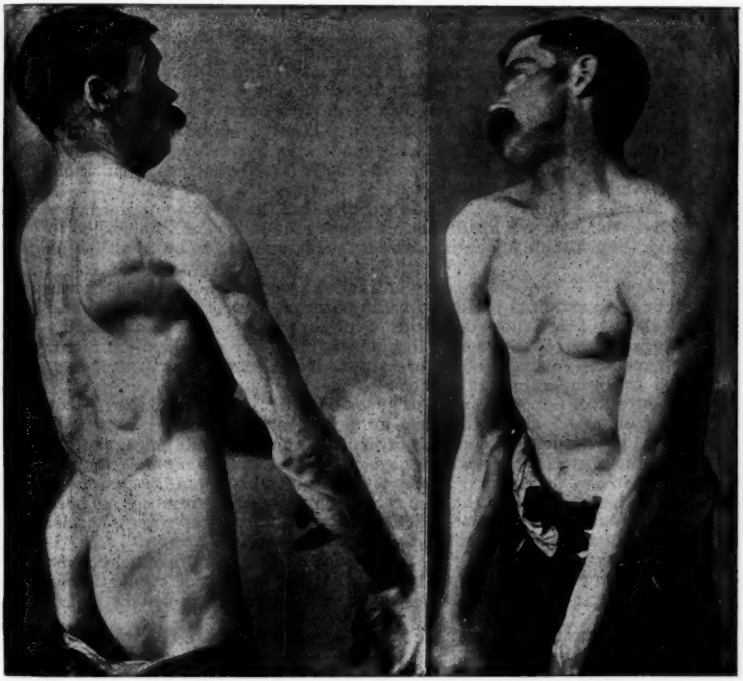

FIG. III. FIG. IV.

[Figs. III. and IV. show the difference in position six weeks after the operation. It will be seen that there is now more retraction of the head and less elevation of the shoulders. The spasm of the arms, of the dorsal muscles (even the glutei) and of the occipito-frontalis is as marked as before. The scars of the operations are visible, and the left sterno-mastoid muscle is seen to be still in a condition which may be described as the antithesis of paralysis.]

was made on the right side along the line of the anterior border of the sterno-mastoid, and about one-eighth of an inch anterior to it, extending from the level of the mastoid process to that of the angle of the jaw. The tissues between the anterior border of the sterno-mastoid and the posterior belly of the digastric muscles were carefully dissected, the external jugular vein having been divided after being ligatured above and below. As the nerve could not be found the incision was extended in a direction at a right angle, and the sterno-mastoid was partially divided transversely. By turning up the upper cut end the trunk of the nerve was then found, and a piece of nerve of three-quarters of an inch in length was removed. The divided muscle was sutured with catgut, the wound was closed by a continuous suture, and dressed with iodoform gauze and absorbent wool. The left spinal accessory was then sought for, the incision being made at a lower level than before. It was easily found, and a similar length (three-quarters of an inch) removed.

April 2.—Patient was a little steadier, but the movements were very active whenever the head was raised from the pillow, and he wished to have the hyoscine injection. The trapezii appeared to be as active as before.

April 5.—The spasmodic contractions were so active that it was difficult to maintain the dressings in position. Accordingly the wound on the right side showed indications of suppuration, and the patient's temperature rose to 102.2°. Morphia was given hypodermically at night.

April 7.—A small collection of pus was released from the wound, and the temperature fell to 98°.

After this period the wounds gave no further trouble, and the patient was able to get about the ward as before, and in a few days to walk round the garden. There was little change in his condition, excepting that the posterior cervical muscles appeared to predominate over the anterior, and accordingly in any violent attack of spasm the head was drawn backward, with the face turned up more than formerly. There was no actual paralysis of either sterno-mastoid or trapezius muscles, which all appeared to contract violently at times.

His writing on the 19th of May showed great improvement since the operation. He left the Infirmary at this date, as it seemed clear that no further operative interference was likely to be of benefit.

This case was from the first clearly beyond the range of medicinal control. Overactive and hypertrophied muscles must be connected with a more or less abnormal condition of the nerve-centres with which they are physiologically connected, and experience has shown that it is practically impossible to control this kind of rebellion of muscle and nerve when the overactivity has become a long-standing habit.

Although medicinal aids have shown themselves to be ineffective, yet the effects of surgical severance of the connection between the muscles and their nerve-centres have been so encouraging as to render operative interference imperative in cases where the spasm is limited to the area of particular nerves.

But further, Noble Smith has shown [1] that even in cases where the spasm has extended far beyond the ordinary range of torticollis, yet the removal of the focus from which the spasm has commenced gives rise to satisfactory results over a much wider area. He endeavours to show "that section and ablation of a piece of the spinal accessory nerve is absolutely certain to remove all spasm from the muscles supplied by that nerve, and is very likely to remove spasms set up in other muscles, although other nerves are apparently involved," and "that the operations of section of the spinal accessory nerve, and of the posterior roots of the cervical nerves, are not followed by serious inconvenience to the patient from paralysis of the muscles."

Drs. Richardson and Walton remark [2]: "It may now be fairly assumed . . . that treatment by drugs is useless, that serious cases cannot bear the restraint of apparatus, and that electricity in all forms is ineffective." They hope for better results from rest in bed, hypnotism, and massage; and they go on to observe that "few sufferers appeal more strongly to our sympathies than the class under consideration. Those who have seen cases of moderate severity only, or cases rheumatic in character, can hardly appreciate the pain and distress caused by spasmodic wry-neck of the severe type. Such patients are rendered unfit for occupation or society, resting the head either in the recumbent or semi-recumbent position, or unsuccessfully attempting to relieve the spasm by holding the hand to the cheek. Before many years have elapsed they, as a rule, welcome operation, even though only moderate hope of cure is offered."

The principal question for solution now is, not whether operation on the spinal accessory nerves is justifiable, but how much farther is it wise to go? Resection of the external branches of the posterior divisions of the second and third cervical nerves supplying the splenius muscle, and of the sub-occipital supplying the rectus capitis posticus major, has been frequently performed by Noble Smith, Powers, Gardner, Keen, and others, and the results have justified the attempts. Keen reports a satisfactory result in three out of four cases.[3] It

[1] *Spasmodic Wry-neck*, 1891. [2] *Am. J. M. Sc.*, 1896, cxii. 39, 40.
[3] *Text-Book on Nervous Diseases.* Edited by Francis X. Dercum, M.D. 1895.

appears that the excision of these nerves on both sides does not impair the ability to hold the head erect, and on the other hand the spasm is greatly reduced or made to disappear, sometimes by section of the spinal accessory nerves only, or by subsequent section of the posterior branches of the cervical nerves.

In the case now reported the habit of overaction had been in existence for twenty years, and the hypertrophy was so great and so widely distributed beyond the area of the spinal accessory nerves, that there was little prospect of relief. However, the ablation of the two nerves has produced a decided improvement in the condition of the patient, although it has not abolished the tendency to spasm over a much wider area than could be controlled by the spinal accessory nerves.

THE DIAGNOSIS AND TREATMENT OF LUMBAGO.

BY

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PAIN in the small of the back is a complaint which brings many, especially otherwise healthy adult males, to the out-patient room.

The exciting cause is apparently in the majority of cases exposure to damp and cold.

Three classes of cases may be distinguished—those of rheumatic myalgia, rheumatic neuritis, and renal pain associated with hyperacidity of the urine—and if the differential diagnosis be made, it is found that treatment is thereby much simplified and restoration to health more readily brought about.

The patients of the third class complain of a dull aching pain in the lumbar region on both sides. The pain, which is constant and not made worse by movement, is not confined to the lumbar region; it extends forwards round the trunk into the groins, and occasionally into the testes. The patient generally complains of scalding during micturition, and the urine, which is quite clear on first being passed, is very acid in reaction and

on cooling deposits abundant brick-red urates. The muscles are not tender on palpation or percussion, but there is often a zone of hyperæsthesia of the skin, best tested by prodding with the head of a pin, extending round from the lumbar region to the lower part of the trunk for a space of about three inches above Poupart's ligament and the pubes. The pain is evidently associated with and probably dependent on a hyperacidity of the urine; just as scalding occurs during micturition from irritation of the urethra, so the bilateral lumbar and abdominal pain results from irritation of the renal pelves; and the hyperæsthesia of the skin is a "referred" phenomenon exactly like that which happens in cases of renal calculus or gravel. The reflex retraction of the testis sometimes seen in renal calculus is not present in these cases, probably because the irritation is not sufficiently great; and the phenomena are always bilateral, though they may be more marked on one side than the other. Treatment is simple and most successful, consisting in the administration of large doses of some indirect antacid such as potassium citrate.

Lumbago due to rheumatic myalgia is characterised by pain in the lumbar region only, generally on both sides, though occasionally on one side only. It very rarely extends to the muscles of the anterior abdominal wall. When the patient is at rest or lying down there is no pain, which occurs only during movement. An easy way of satisfying oneself as to this is to ask the patient to stoop down and touch his toes—the action is performed carefully and stiffly, with evident discomfort, often much greater whilst resuming the upright position than in stooping. The muscles are not in the least tender on palpation, and there is no hyperæsthesia of the skin either over the affected muscles or on the front wall of the abdomen. The urine is normal, and there is no scalding during micturition.

Lumbago from rheumatic neuritis resembles rheumatic myalgia in many of its features, but differs in three particulars. The pain, although rendered worse by movement, persists in a less degree during rest. Further, there is some tenderness on palpation, particularly over the spots where the nerves run through fasciæ. And lastly, pain is often felt along the course

of the sciatic nerve or nerves as well as in the lumbar region. If a case be seen early there is rarely any evidence of impairment in the conductivity of the nerves.

The treatment of lumbago due to rheumatic myalgia or neuritis consists in the administration of salicylates until toxic effects are produced, and in the use of counter-irritation, the best application for which is capsicum, which was recommended many years ago, but has been but little used. The ordinary B.P. tincture is diluted with water in the proportion of 1 to 5, and applied on lint, covered by oiled silk or other protective to prevent evaporation. The effects of this are extraordinary and quite inexplicable—a patient, who a quarter of an hour previously could not make the least movement by reason of the pain, is able to move freely and painlessly. This result is, it is true, somewhat transitory; it wears off in an hour or so, but can be reinduced by a fresh application. One usually directs this to be done for half-an-hour four or five times a day.

I have found that the salicylates act more speedily in cases of rheumatic neuritis than of rheumatic myalgia—in the former the pain usually ceases as soon as salicylism is produced, whilst this has to be kept up for some little time in cases of myalgia before its cessation.

These cases of rheumatic neuritis and myalgia have some etiological relationships with ordinary rheumatic arthritis. It is easy to divide cases of "rheumatism" into two great groups —in the first of which are such affections as endocarditis, pericarditis, nodules, chorea, and arthritis, and in the second rheumatic myalgia and neuritis. Many authors assign them to different causes. And certainly such a division seems somewhat justifiable from a clinical point of view; as a rule a patient suffers from one or more of the diseases of one group only. But such a division is a little arbitrary; if, for instance, a large number of cases of lumbago be taken, and those in which the pain is renal in origin be first subtracted, a large percentage of the remainder will be found to have suffered at one time or another from "major" rheumatic attacks.

The relationship then of these "minor" rheumatic affections

is perhaps a good deal nearer that of ordinary rheumatism than is generally supposed, and affords an explanation of the good effects produced by the administration of salicylates.

Though lumbago is from many points of view but a trivial affection, it produces so much discomfort that any increase in our power of alleviating it deserves some consideration; and the differential diagnosis and treatment on the lines here marked out will, I think, be found satisfactory in practice.

NOTES ON SELF-POISONING AND ITS TREATMENT, WITH SPECIAL REFERENCE TO SOME PHYSICAL METHODS.

BY

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PROFESSOR BOUCHARD says that "the organism, in its normal, as in its pathological state, is a receptacle and a laboratory of poisons."[1] And Dr. Oliver, in the preface to his translation of Bouchard's lectures, states that every moment of our lives we run the risk of being overpowered by such poisons. In this paper I have brought together some facts of clinical significance gleaned from the recent literature of this important subject, and especially from the above-named lectures.

An important place on the list of those poisons to the ill-effects of which the organism may, by the failure of elimination, be at any time subjected belongs to the mineral constituents, and especially to the potassium compounds, of the food.[2] For potassium is a powerful convulsive. Of the various salts constantly entering the circulation a considerable portion is retained by the blood-globules, which have a marked affinity for potassium, and the part so retained may be liberated in the plasma by any cause which induces the death and disintegration of these globules. Minerals are of course constantly being

[1] *Lectures on Auto-Intoxication in Disease.* By Ch. Bouchard. Tr. by Thomas Oliver, M.D., 1894, p. 14.

[2] *Op. cit.*, p. 10.

eliminated by the healthy kidneys, and Bouchard attributes one-third of the normal toxicity of urine to their presence. One result, therefore, of the failure of renal excretion will presumably be the manifestations of mineral poisoning, and especially the convulsive effect of potassium.

Toxic properties may be alleged of most, if not all, the secretions and excretions normally present in the alimentary canal, or, indeed, elsewhere. Thus a toxin chemically characterised by strong reducing powers may be extracted from fresh saliva. The toxicity of bile is a subject of more practical importance. Bouchard asserts[1] that during twenty-four hours a man makes by the activity of his liver alone enough poison to kill three men of his own weight, 1 kilogramme of bile yielding enough to kill more than 2,800 grammes of living tissue. Man forms in eight hours by his hepatic secretion alone enough poison to kill himself. Bile is, volume for volume, nine times as poisonous as urine; in an equal period the biliary secretion represents a toxic power six times that of the urinary secretion. Of the biliary ingredients bilirubin has by far the greatest toxic power, being ten times as poisonous as either of the bile-salts, and constituting by its presence two-thirds of the total toxicity of the secretion. The poisonous colouring matter of bile on contact with the acid chyme is, as a rule, suddenly precipitated in the small intestine, and by a somewhat similar process the biliary salts and acids are also rendered insoluble. This change retards and limits reabsorption, and so diminishes the risk of self-poisoning. Moreover, the liver, as Schiff has demonstrated, arrests the reabsorbed biliary ingredients and restores them to the intestines or transforms them into harmless matter. This protective agency of the liver is by no means confined to the arrest or modification of the biliary toxins, and as a safeguard against self-poisoning is only second to the rôle of the kidneys. Thus the alkaloid pepto-toxin which results from the peptic digestion of fibrin is an extremely poisonous base, and the normal products of digestion when introduced (as by injection into the jugular vein) direct into the general circulation, so as to escape the synthetic activity of the liver,

[1] *Op. cit.*, p. 224.

may cause a fatal toxæmia in the animal so treated.[1] Gautier has established the existence of a whole class of alkaloids (termed leucomaines and of "great importance . . . in the genesis of disease") which, like pepto-toxin, are necessary products of vital functions. To this class belong some at least of those toxic products of cellular metabolism which, Bouchard asserts, are constantly being absorbed by lymphatics and vessels from the extra-cellular fluids of the body.

Returning to the poisons of gastric or intestinal source, we note that although the occurrence of potentially deleterious products is a necessary result of normal digestion, their quantity and virulence will be greatly augmented by conditions tending to acid or putrid fermentation. Omitting, as beyond our present scope the consideration of poisoning by the ingestion of putrid or putrefying foods, it is worth remembering that simple apepsia may be the means of producing a condition that is practically identical. For in cases where even fresh and wholesome food, through debility or idiosyncrasy, fails to evoke the proper digestive response, the hydrochloric acid (which normally acts as an antiseptic) being absent, putrefaction of the food occurs and toxic symptoms ensue. Hence, presumably, the faintness, mental oppression, etc., which in dyspeptics follow a full meal. Toxic alkaloids are (as their nitrogenous basis would suggest) most conspicuous as results of the putrefaction of *proteid* substances, and it is noteworthy that the final products of such decomposition (such as ammonias and organic acids) diffuse readily and are readily absorbed.

An important predisposing cause of chronic auto-intoxication is gastric dilatation. Bouchard[2] believes this condition to be very common, and asserts that some degree of it may be found in seven out of eight cases of chronic dyspepsia. In many such cases he has observed certain nodosities which he considers pathognomonic of gastrectasis, and attributes to the effect of absorbed acetic acid. Their favourite site is the second phalangeal articulations of the hands, where they are due to

[1] *Ptomaines and other Animal Alkaloids.* By A. C. Farquharson, M.D., 1892, p. 102.

[2] *Op. cit.*, pp. 165–6, 174.

an enlargement of the bases of the second phalanges, but they may affect other joints. They somewhat resemble the rheumatic nodules of Heberden (which, however, affect the third phalangeal articulations), and are also comparable to the beaded ribs of rachitis.

Seeing that toxins are commonly so abundant in the stomach and intestines, it is somewhat surprising how rarely toxic accidents occur. Possibly some poisons are (as Stich suggests) neutralised, as by dialysis, in process of absorption, or in the circulation by the activity of leucocytes. "But if," says Bouchard, "we cannot demonstrate that these poisons enter the blood, we can prove that some of them leave it (and practically unchanged) in the urine." There is, moreover, a quantitative and qualitative parallelism between the alkaloids present at a given time in the fæces and those which are being eliminated in the urine. If, by antisepsis or by the administration of charcoal, we suppress intestinal fermentation or neutralise its products, we diminish in proportion the toxicity of the urine. Phenol is, almost certainly, eliminated unchanged, and the urinary percentage of indican (a derivative of indol) rises or falls with the increase or diminution of indol in the fæces.

Probably (as was suggested above) some of the absorbed gastric and intestinal toxins are modified in passage through the liver. Heeger has injected into the portal vein blood containing nicotine, morphine, and other alkaloids. The blood coming from the liver contained less of these.[1] The experiments of Schiff and G. H. Roger practically demonstrate that the liver not merely arrests poisons but actually destroys them. The alcoholic extract of rotten meat injected into the portal vein is twice less toxic than when introduced into the general circulation.[2] Hence, probably, the great difference in the potency of oral and hypodermic medication.

Remembering that the manufacture of leucomaines is an invariable result of normal cellular metabolism, it is not surprising that the liquor sanguinis which receives them has an average toxicity of measurable degree. Bouchard calculates that a kilogramme of living blood contains in its plasma alone

[1] Bouchard, *op. cit.*, p. 17. [2] *Op. cit.*, pp. 142–3.

enough poison to kill more than 1,250 grammes of living matter,[1] and that a man would die toxæmic if his blood contained ten times its normal quantity of poison. Cellular metabolism is to a certain extent independent of the presence of free oxygen, and it is probable that those substances which are most poisonous are especially the waste products of such anaërobiotic activity. Conversely, by the inhalation of oxygen the toxic products of cell metabolism are diminished, and those actually circulating in the blood are rendered less virulent and easier of elimination. And here we may also note in passing the importance of the respiratory function as a means of excretion, and especially the excretion of such volatile nitrogenous products of anaërobiotic metabolism as have just been alluded to. Du Bois-Reymond "terms the organic poison excreted . . . 'anthropotoxin,'"[2] and to it is due the peculiar stuffy odour of the air of a room which has been breathed in for some time. Besides poisons of normal or quasi-normal occurrence, there are cases in which the vitiated elaboration of matter by the system results in the production of *anomalous* toxins. One such is acetone, the cause of acetonæmia, which occurs in the blood and urine of the subjects of diabetic coma, and gives a claret colour with perchloride of iron.[3] Certain of the symptoms of cholera are due to an anomalous poison elaborated either by the microbes or by the system itself as influenced by them.[4]

There can be no question but that the principal safeguard against self-poisoning is the functional integrity of the kidneys.[5] Since normal urine is poisonous in a high degree, the importance of renal permeability is obvious. The toxicity of healthy urine varies considerably according to cerebral or muscular activity, sleep, diet, etc.; but, on the average, a man excretes in two days and four hours enough urine to poison himself.[6] Night urines are, upon the whole, less toxic than those of the day. The toxicity of both is greatly reduced by muscular exertion on the part of the subject, or by his exposure to compressed oxygen. The urines of sleep are always markedly convulsive, while those of the day period are but slightly so, but produce narcosis. It

[1] *Op. cit.*, p. 76. [2] Farquharson, *op. cit.*, p. 122.
[3] Bouchard, *op. cit.*, pp. 142, 247, 287. [4] *Op. cit.*, p. 265. [5] *Op. cit.*, p. 287.
[6] *Op. cit.*, p. 35.

would seem that during the day the body forms, and in part eliminates, a substance which in accumulation would produce sleep, and during the night a convulsive agent which would induce waking.[1] Normal urine contains at least seven poisons: a diuretic substance (urea), a narcotic, a salivating principle, one that contracts the pupil, one that lowers the temperature, and two convulsives—the one mineral, the other organic.[2] Of the total toxicity Bouchard assigns two-fifths to the colouring matters, etc., separable by charcoal; one-third to minerals, especially salts of potassium; about one-seventh to urea, and a small fraction to ammonia.[3] In febrile urines the pigments are ten to twenty times more abundant than in normal urines, while the potassium (liberated by cellular disintegration) is doubled or trebled. Hence, rather than to the presence of any *special* poison, is due the great convulsive power of such pathological urines. The urine in cases of albuminuria is often of low toxicity, while on the supervention of uræmia, if suppression does not occur, its toxicity practically disappears. Uræmia is to be regarded as a mixed poisoning, not by urine, but by accumulation of substances which should have become urine, the sources and natures of which have just been described. The immediate cause of suppression of urine may be a deficiency of urea, the physiological diuretic. A characteristic example of self-poisoning (as all its symptoms from the early pupillary contraction to the last convulsive throe attest) is the ordinary death-struggle, the onset of which is likewise often determined by renal failure.

From what we know of its causation, some general rules for the prevention and treatment of self-poisoning may be deduced. Thus, by careful dieting (to take for granted more obvious, but all-important, hygienic precautions) we can minimise first the introduction of toxins and secondly their generation by putrid or acid fermentation. Or we can arrest such fermentation by the use of antiseptics, or fix and prevent the absorption of its products with charcoal. By stimulation of the liver we can perhaps assist that organ in arresting and destroying absorbed poisons. Failing this, we must promote elimination, by the

[1] *Op. cit.*, p. 41. [2] *Op. cit.*, pp. 60–5. [3] *Op. cit.*, p. 120.

skin, lungs, bowels, and, above all, the kidneys, the chief natural route of toxic egress. Copious drinks, cold baths and cold enemata are the means Bouchard recommends to this end; and in cases where the absorption of putrid products is to be feared milk has the advantage of inducing solid and scanty motions, while it contains little potassium and but few extractives. Diaphoresis is often useful (especially, I think, in chronic cases), but we must be careful not to unduly diminish the amount of the renal excretion. In certain cases we may hope to counteract by physiological antidotes, or possibly by the administration of oxygen gas, the effects of toxins in the blood. In convulsive cases the use of sodium-salts is preferable to that of salts of potassium; and broths rich in minerals and extractives are to be avoided. In acute cases a critical period may be tided over by the aid of stimulants.

Anyone who dispassionately considers the facts which have just been reviewed cannot but suspect that some kind or degree of self-poisoning is the fundamental factor of many apparently very diverse diseases. Consider for a moment the extreme frequency of the following conditions; namely, excess of food rich in nitrogenous materials, minerals, or extractives; excess of easily fermentable or putrefiable foods; dyspepsia, apepsia, and gastric dilatation; pre-occupation and consequent partial and temporary disablement of the liver, due to an excess of fatty food, alcoholic indulgence, or other dietetic error,—or, if more habitual, to chronic intemperance, a sedentary habit, or the occupation of an ill-ventilated office or dwelling; limitation of the respiratory and excretory activity of the lungs and skin; functional or organic deficiency on the part of the kidneys. It is a safe assumption that the usual result of any one of these more than common conditions will be at least a temporary rise in the toxicity of the blood; consequently, that self-poisoning of some kind or degree plays a part in determining the symptoms of almost every complex pathological condition. For if an excess of food be taken, some of the products of its decomposition will probably escape the synthetic activity of the liver and pass through from the portal into the general circulation. If, on the other hand, the toxic by-products of digestion be of

only normal quantity and virulence, but if, on reaching the liver, they find that organ temporarily disabled, the result will be practically the same. Again, supposing the poisonous products which from all sources enter the circulation to be only of normal quantity and power, but the renal function temporarily or permanently deficient, the inevitable consequence (unless or until some other outlet be provided) can but be a relative toxæmia.

The "other outlet" of which one immediately thinks in this connection is, of course, the skin, whose myriad sweat-glands Nature would seem to have provided as a natural safeguard against the perils of renal insufficiency. That cutaneous elimination may be regarded as an auxiliary or even an alternative to renal excretion is in practice generally admitted. Witness the classical treatment of acute nephritis by diaphoresis. If urea and uric acid are not (as has nevertheless been claimed by some observers) normal constituents of sweat, they have, at any rate, been often detected in it in considerable quantities in pathological conditions. So also have blood, albumen, oxalate of lime, sugar, lactic acid, indigo, bilirubin and other pigments. It is a matter of common knowledge that drugs, such as iodine, the iodides and tartaric acid, are eliminated by the skin. Probably then the chemical qualities, as also the specific gravity, of the sweat vary like those of the urine in some as yet undetermined relation to the condition of the blood. Bouchard, who speaks[1] somewhat slightingly of diaphoresis as compared with diuresis, warns us not to unduly diminish renal excretion by stimulating cutaneous elimination. It is conceivable that there may be a physiological incompatibility between *medicinal* diaphoresis and diuresis, but the case is different as regards *thermal* diaphoresis which can quite well be combined with renal stimulation. In the Turkish bath, for instance, we have a therapeutic agent of the first order, and one which, in the wide class of cases under consideration, is of almost universal applicability. Water-drinking is part of the routine of a properly-administered Turkish bath, and pure water is one of the best of diuretics. And apart from this even, my own

[1] *Op. cit.*, pp. 276–7.

experiments, so far as they have gone, tend to the conviction that the activity of the kidneys is rather increased than diminished by the Turkish bath, the average volume of urine passed in the twelve hours following a bath being slightly greater than that passed on days when the same extra quantity of water was drunk at the same hour but no bath taken; while the average specific gravity was in both cases about the same. As regards the use of hot-air baths in cases of auto-intoxication, there is another theoretical consideration which tells in its favour—the fact, namely, that exposure in, and inhalation of, an atmosphere heated to from 150° to 250° F. may raise the temperature of the blood several degrees; and this rise, slight and temporary though it be, will favour the oxidation of leucomaines, etc., thereby rendering them comparatively innocuous. But justice will never be done to the value of the physical methods until a scientifically constructed hydro-thermal installation is considered as necessary as an electrical department to the equipment of a good general hospital.

In conclusion, I will quote some necessarily brief particulars of a few cases where physical treatment proved decidedly beneficial, cases which (however different in other respects) resemble one another nevertheless in the fact that self-poisoning of some kind or degree is pretty clearly indicated:

Case 1.—A lady of twenty-seven came under my care just after her fourth attack of acute rheumatism. She was suffering from aortic stenosis of long standing, but her chief present complaint was of rather severe rheumatic pains in the shoulders, elbows, wrists, fingers, ankles and knees. There was also slight œdema of both ankles, and a systolic bruit of blowing character was audible at the base of the heart. In connection with this point I would mention the recently published experiments of Dr. Lazarus-Barlow, which warrant the conclusion (anticipated in part by Wooldridge in 1889) that œdema, even the cardiac variety, is never due to purely mechanical causes, but proximately to local disturbances of nutrition, and especially to the poisoning of the tissues by retained waste products.[1] In this case I further noted that the skin was dry and scaly, and scaly eczematous patches occupying the site of healed ulcers were present on the inner surface of the right leg and above the left internal malleolus. The patient was treated with mild Turkish baths of brief duration, followed by a simple ablution, also with massage and dry faradism to the painful parts. The pain and œdema rapidly subsided, the general health improved markedly, and she left within a month, practically well but for the valvular lesion.

[1] *Brit. M. J.*, 1895, i. 634, 691.

Case 2.—Mr. H., aged 61, a small thin man, looking very ill, complained of asthma and general weakness. Until six years before the date of his coming to me he had enjoyed fair health, but broke down then through malnutrition from dyspepsia, attributed by the patient in the first place to the neglect and consequent loss of nearly all his teeth. His weight had diminished from eleven to eight stone, his hands were purple from venous congestion and were cold to the touch. He suffered from prolapse of the rectum during defæcation, due apparently to simple relaxation of the parts involved, and he was generally in a miserably weak condition. Respiration was habitually wheezy, but there were also frequent nocturnal paroxysms of dyspnœa resembling true asthma. Auscultation revealed little beyond a certain amount of emphysema. He wore a fairly good set of artificial teeth, but still suffered greatly from indigestion. He was carefully dieted, the foods prescribed being chiefly of a light kind (such as fish or fowl and farinaceous materials) and ordered to drink milk freely, and to take four or five mild Turkish baths weekly, with other baths of less importance. The quantity of milk had soon to be reduced, because of constipation, to about a pint in the day, but the appetite improved wonderfully, and in three weeks he had regained five pounds of body-weight and the nocturnal asthma was immensely relieved. So great an improvement can hardly be accounted for as the result of mere diet and change of air. My own explanation would be that the asthma was kept up by morbific products due to incomplete digestion and deficient aëration, and that the vicious circle thus established was (for a time) broken by their elimination through the skin.[1]

Case 3.—Miss M., aged 24. This patient was sent to me by Dr. E. Jones, of Cardiff, who gave the following particulars of the case as noted by him twelve months earlier: "The patient complains much of abdominal distension; there is alternate polyuria and dysuria. Menstruation regular, lasts two days, and is painful throughout. The skin is dry, the bowels are costive, and she is somewhat anæmic. She complains also of palpitation and morbid cephalic sensations." Abdominal palpation revealed slight tenderness over the right ovary. The urine was free from albumen. The patient is a publican's daughter, and is a good deal in the bar. (On this point I questioned her closely, and she admitted taking beer, but in moderation only; and I saw no reason to disbelieve her.) When first seen by me a year later, the condition was much the same. There was a constant sense of abdominal distension, aggravated after food, and due in part at least to flatulency, for attacks of palpitation were frequent, and the tongue was large and coated with a thick yellow fur. The urine was alternately pale and copious or scanty and loaded with urates, the spirits were depressed, and although she slept heavily she awoke every morning feeling dull and unrefreshed. She complained that her ankles and eyelids swelled towards night, but œdema was not perceptible. In this case the existence of catarrhal gastritis, with fermentative decomposition of the ingesta and the absorption of toxic products with which the deranged liver was in no condition to deal effectually, was matter of clearest inference. The treatment consisted of Turkish baths, mustard fomentations to the hepatic region (liver-packs), and a suitable diet. Hot water to be drunk freely. The patient made an excellent recovery within the month of her stay, and two months later I learnt that the improvement had been more than maintained.

[1] Bouchard, *op. cit.*, pp. 164, 171.

CASE 4.—J. M. H., aged 35. Malarial cachexia, lithiasis. The patient, a seafaring man, sent to me by Dr. Ogilvie, had been employed on long service in and about New Guinea. During the whole period of this service he had suffered from severe but irregular attacks of malarial fever, but especially during the last two years, when he had been much on land. He had recently been jaundiced, and the urine was still very dark. On examination, I found it free from blood and albumen, but of high specific gravity, and loaded with pink urates. The liver and spleen were much enlarged, and there was hypertrophy of the left ventricle. The pulse was 104, full and soft, and the temperature normal. He was taking quinine and arsenic, but the quantity was diminished while under my care. The complexion was sallow, but anæmia was not extreme. The treatment consisted of Turkish baths, mustard body-packs, copious draughts of hot water, and a suitable diet. He could only remain a fortnight, but on his return Dr. Ogilvie found the urine normal and the general health greatly improved. He also reported a slight reduction in the size of the liver and spleen.

It would be easy to multiply examples, but these four cases will suffice to illustrate the certainty and ease with which benefit is afforded by simple treatment on these lines in cachexial conditions of various kinds. The treatment is preventive as well as curative, because (with the exception perhaps of an occasional purgative) medicines are usually withheld, so that the patient's attention is naturally directed to the importance of care and moderation in the matter of food and drink, the need of fresh air, exercise, and so forth. So long as drugs are being taken there is a noticeable tendency to rely exclusively upon them for relief. In prescribing Turkish baths it is necessary to be explicit as to the details of temperature and duration, and in cases of debility the shampooing is often better omitted. Twenty to thirty minutes' exposure to a temperature of 125° F., followed by a simple spray bath, or even a tepid sponging, may be regarded as a minimum "dose."

Progress of the Medical Sciences.

MEDICINE.

The following is an account of some of the work done in **Serumtherapy** during the past year:

Sufficient time has now elapsed and a sufficiently large number of cases of **diphtheria** have been treated by antitoxin to put us in a better position to judge of the value of the treat-

ment in this disease. Reports from so many different sources speak with so great unanimity with regard to the reduction in the death-rate and mitigation in the symptoms of diphtheria, that there is no room for doubt as to the superiority of this method of treatment over those formerly in vogue. This reduction in the death-rate is too great and too uniform in the most widely separated countries to be accounted for by a supposed milder type of diphtheria in the last few years, or by the fact that, as Dr. Purjesz points out,[1] the general interest taken in the antitoxin treatment by the lay papers and the public has led to a large number of mild cases being brought to the hospitals for treatment that would otherwise never have come to them. The statistics may also have been somewhat too favourable for the serum, as compared with the previous treatment, on account of the fact that the now common bacteriological examination often shows the presence of the diphtheria bacillus in cases that would have formerly been regarded as tonsillitis, and that these mild cases are injected with antitoxin. But this would not affect more than a small proportion of the cases. At the same time, antitoxin does not cure all cases of diphtheria, nor would it be reasonable to expect it to do so.

The report of the American Pediatric Society[2] is based upon the collective returns from 613 physicians, of whom over 600 pronounce themselves strongly in favour of the serum treatment. 3384 cases are reported: the doubtful cases which died are included in, those which recovered are excluded from, the report. On account of the widely separated localities from which the records came, no local peculiarities can account for the favourable results. No new cases of sudden death immediately after the injection have occurred. In nineteen cases only, injected reasonably early, the serum did not appear to have a favourable influence; of these, in nine the diagnosis was doubtful, three were malignant, four complicated with measles, and in two the serum was of doubtful value. In three the patients were made worse, but in only one of these could the result be fairly attributed to the injection. The general percentage mortality was 12.3; in cases injected during the first three days, 7.3; excluding cases moribund at the time of injection or dying within twenty-four hours, it was 8.8 and 4.8 in the two groups respectively; in cases injected on or after the fourth day it was 27. Of the laryngeal cases, many severe, one half recovered without operation. In intubated cases the mortality was 25.9 per cent., a reduction of more than 50 per cent. on any other method of treatment. Broncho-pneumonia occurred in 5.9 per cent. In contrast to two or three instances in which the serum is believed to have acted unfavourably on the heart are a large number in which the heart's action was distinctly improved. There is

[1] *Wien. med. Presse*, 1896, Nos. 25 and 26; abstract in *Centralbl. f. innere Med.*, 1896, xvii. 1145.

[2] *Pediatrics*, 1896, ii. 97; abstract in *Am. J. M. Sc.*, 1896, cxii. 214.

little, if any, evidence to show that nephritis occurred in any case as the result of the injections. Paralytic sequelæ occurred in 9.7 per cent., the effect of the serum being less marked upon the nervous system than on any other part of the body. Injection should be made as early as possible on the clinical diagnosis, not waiting for the bacteriological confirmation; but however late the first observation is made, an injection should be given unless the progress of the case is satisfactory. In severe cases, or in laryngeal diphtheria in children over two years, an initial dose of 1,500 to 2,000 units is sufficient, to be re-repeated if there is no improvement in from eighteen to twenty-four hours: a third dose at a like interval may be necessary. For severe cases in children under two years and in mild cases an initial dose of 1,000 units is usually enough: it is to be repeated if necessary.

The Metropolitan Asylums Board have issued a statistical report[1] on the antitoxin treatment in six fever hospitals in 1895, as compared with cases treated in 1894, in which no antitoxin was used, and the mortality was exceptionally low. The general percentage mortality rate is decreased 7.1 in favour of 1895, and in cases in the first five years of life 13.2. The mortality when the treatment was begun on the first and second days of the disease is 4.6 and 14.8 per cent. respectively in 1895, as against 22.5 and 14.8 per cent. in 1894. The mortality in laryngeal cases is reduced from 70.4 per cent. in 1894 to 49.3 per cent. in 1895. The complications of the disease were apparently not influenced by antitoxin. The cases were 2182 in nuumber, and the authors lay particular stress on the importance of beginning the treatment as early as possible. They point out: (1) A great reduction in mortality in cases coming under treatment on the first or second day of the disease. (2) A general mortality below that of any other year. (3) A particularly remarkable lowering of mortality in laryngeal cases. (4) A uniform improvement in tracheotomy results. (5) A beneficial effect upon the clinical course of the disease.

Further points brought out in other reports are: the great importance of early treatment, some showing recovery of all cases injected on the first day of the disease; the early disappearance of the membrane, by the seventh day in over 80 per cent. of cases; the subsidence of severe laryngeal symptoms, and the smaller number of cases requiring tracheotomy: the Berlin report states that the mortality decreases as the age of the patient increases: other statistics show a striking decrease in the mortality in cases under five years of age.

Dr. Funck, of Brussels,[2] on the basis of the collection of a number of statistics, states: (1) Serum treatment diminishes the mortality of diphtheria. (2) Serum treatment often checks the

[1] Abstract in *Am. J. M. Sc.*, 1896, cxii. 225.

[2] *J. de Méd., Brux.*, 1896, No. 13; abstract in *Centralbl. f. innere Med.*, 1896, xvii. 1148.

further extension of the diphtheritic process, and avoids tracheotomy. (3) Sepsis, severe affections of the heart, kidneys, and nervous system are lessened. (4) The serum is absolutely harmless.

In a discussion at the New York Academy of Medicine,[1] Dr. W. H. Thomson gave the following statistics of the antitoxin treatment of diphtheria, drawn from a paper by Professor W. H. Welch in the *Johns Hopkins Hospital Bulletin* for July–August, 1895, and from a summary of the statistics of the treatment, brought up to May, 1896, by Dr. A. R. Guerard. Hospital reports are selected partly because they would not give the most favourable results, and therefore are less affected by the arguments brought forward by the opponents of the treatment. The reports are drawn from 85 hospitals in all the European countries, the United States, Australia, and Japan, giving a total of 9,893 cases with 1,820 deaths, or a mortality of 18.3 per cent. "In 53 of these hospital reports there are given statistics of 7,277 cases with a mortality of 20 per cent. under serum treatment in which definite comparisons are made with the mortality previous to the use of antitoxin of 44.3 per cent.; thus justifying the contention that so far as hospital practice goes antitoxin has caused a reduction of fully 50 per cent. in the general death rate." Further statistics from reports of 3,760 cases treated with antitoxin in private practice give 296 deaths, or 7.8 per cent.

A report from the Imperial Health Office in Berlin[2] for the second quarter, 1895, states that in 2,130 cases treated, excluding cases moribund on admission to hospital, the death-rate was 13.3 per cent. In the first quarter of the year the rate was 16.7 per cent. The injection was practised on the first two days of the illness in 752 patients, of whom only 48 died, a mortality of 6.4 per cent.; a much smaller death-rate than in the first quarter, due to the greater strength of the serum used. Injections performed on the third day gave a percentage mortality of 10; on the fourth day, 17.3; on the fifth day, 23.5; from the sixth to the tenth day, 28.3; from the eleventh to the nineteenth day, 17.6. 841 patients suffered from laryngeal diphtheria, of whom 588 were operated on, and 176 died; a mortality of 29.9 per cent. Secondary effects noted were, skin eruptions, pains in the joints, and suppuration at the site of injection.

In Glasgow,[3] in the years 1890–94, the percentage death-rate from diphtheria was respectively 39.8, 38.8, 37.2, 40.5, and in 1894, 35.5. In 1895, out of 179 cases 137 were treated with antitoxin, four being moribund on admission, and thirty-eight so mild as to give rise to no anxiety. Thus the severe cases only were treated by antitoxin. In seventy-six cases only one injection of from 10 to 20 c.c. was necessary; in the others additional ones were given. Of the total 179 cases twenty-five, or 14 per cent., died. That the fall in fatality is not due to a natural decline in

[1] *Med. Rec.*, 1896, xlix. 893. [2] *Lancet*, 1896, i. 331. [3] *Ibid.*, 1658.

severity of the disease in Glasgow is shown by the fact that the mortality in home-treated cases in 1895 was higher (24 per cent.) than in 1894 and 1893, 23 per cent. and 22 per cent. respectively. Of tracheotomy cases the fatality rate was in 1893, 76.2 per cent.; in 1894, 86.9 per cent.; and in 1895, only 34.5 per cent.

Dr. Virneisel reports[1] from the Coblentz Hospital 150 cases treated by antitoxin, of whom 9 died, or 12.7 per cent.: of 22 injected on the first day of the disease, all recovered; the death-rate for those injected up to the third day was 31.6 per cent.; after the third day, 68.4 per cent. Of 79 tracheotomy cases previous to the serum treatment 48 died, or a mortality of 61.4 per cent.; of 64 tracheotomy cases treated with serum 15 died, or a mortality of 23.4 per cent. Of the whole number treated, one-third were only brought to the hospital and injected on the fifth day of the disease; and of the 18 deaths, 6 patients were brought in a dying condition to the hospital. The author emphasises the great importance of early treatment.

Dr. Karl Fürth gives[2] the following experience at Freiburg:

Date.	Cases treated: Without serum treatment.	Percentage of deaths.	Tracheotomy cases.	Percentage of deaths.
June, 1892—June, 1893	95	38.9	41.0	74.3
June, 1893—June, 1894	145	38.6	52.4	67.1
June, 1894—June, 1895	144	19.4	34.7	50
	With serum treatment.			
June, 1895—June, 1896	150	15.3	23.3	42.8

Whilst in the earlier periods the death-rate for children under two years was 60—100 per cent. Of 19 cases under two years treated by serum only 3 died, although 8 required tracheotomy. In the later cases a larger dose of serum was employed—1690 units; in several cases 4000 units were administered within twenty-four hours. Of 46 cases treated on the first or second day of the disease, all recovered.

A later communication[3] from the Caroline Children's Hospital in Vienna states that of 633 cases treated before serum 292 died, or 46.1 per cent.; of 200 treated with serum 34 died, or 17 per cent.

		No. of Cases.	Deaths.	Percentage mortality.
Of these cases (1) Cases in which the throat or the larynx was affected and not operated on	before serum treatment	331	83	25
	with serum	159	11	6 9
„ „ „ Operated on for Croup	before serum	302	209	69.2
	with serum	41	23	56

1,000 units were injected on admission; if after 24—36 hours no tendency to heal or signs of spreading were observed, a second injection was given. In 69 cases localised to the throat there was only 1 death. In 10 out of 28 cases of laryngeal croup symptoms of stenosis declined shortly after admission;

[1] *München. med. Wchnschr.*, 1896, xliii. 456. [2] *Ibid.*, 669.
[3] *Wien. med. Wchnschr.*, 1896, ix. 795.

1 died of heart-failure, 2 of pneumonia, six and ten hours after admission respectively; in 15 cases tracheotomy was performed, of which 6 died. Three cases of diphtheria showed signs of septic infection. They terminated fatally, the injection of serum having no influence on them. The membrane disappeared on or before the fourth day in 23 cases, on or before the sixth day in 29, on the seventh day in 8, later than the seventh day in 8. There was albuminuria in 28 cases; symptoms of heart-failure observed in 5. An urticaria-like rash was observed in 9 cases; scarlatiniform or erythematous in 7.

The importance of early treatment is also brought out in a series of 352 cases reported by Dr. Aaser.[1] The mortality in cases treated on the first day of the disease was *nil;* in those treated on the second day it was .9 per cent.; on the third day, 11.6; after the seventh day, 50. The death-rate in cases in which tracheotomy or intubation was necessary was 29.2 per cent. The author thinks that erythema as a consequence of the injection is less frequent if the serum is filtered through a Chamberland filter.

As to **the immunising power** of the serum, the Coblentz Hospital Report[2] states that in four out of 150 cases treated a second attack occurred within twelve months of the first; and at the Caroline Hospital in Vienna relapses were noticed in several cases in a few days—2 to 18—after the first attack treated by antitoxin, and one patient had three distinct attacks in seven weeks. Kassowitz states[3] that neither a severe attack of diphtheria nor the injection of a large number of "immunising units" of serum brings in man insusceptibility to the diphtheria poison. After larger or smaller immunising doses of serum the attacks of diphtheria are as frequent as without them; the "immunised" person may suffer from an attack of diphtheria as soon as a few weeks or months afterwards, and the attack may be a severe one and end fatally in spite of serum-treatment. Rubens says[4] that a single injection of 200 units of Behring's serum should protect against diphtheria for several months. In the case, however, of a child affected with severe diphtheria, a brother aged 5 years, and a sister aged 7, were injected with 200 units as a protective measure. Four weeks later the brother passed through a typical attack of the disease, though not so severe as the first case.

With regard to any **ill effects** that may result from the antitoxin injections, it is obviously difficult to say what effects are due to the serum and what to the disease, or in fatal cases to know whether death is actually due to serum. Prof. Kolisko,

[1] *Tidsskr. f. d. norske Lægefor.*, 1896, Jan.; abstract in *Centralbl. f. innere Med.*, 1896, xvii. 923.
[2] *Loc. cit.*
[3] *Wien. med. Wchnschr.*, 1896, Nos. 21—23; abstract in *Centralbl. f. innere Med.*, 1896, xvii. 1145.
[4] *Deutsche med. Wchnschr.*, 1895, No. 46; abstract in *Centralbl. f. innere Med.*, 1896, xvii. 925.

of Vienna,[1] who had made 1000 autopsies on fatal cases of diphtheria before the serum treatment was introduced, considers, as a result of his *post-mortem* examinations on fatal cases treated by antitoxin, that the serum favourably influences the diphtheritic process; that as a consequence of it, where a sufficient dose has been given and an interval of not less than twenty-four hours has elapsed before death, the membrane is more easily separated, is looser, or pultaceous, whether in the pharynx, larynx, or bronchi, and that the anatomical changes in the organs are the same as those under the ordinary treatment. Perhaps more definite information can be gained from the use of the serum as a preventive measure, and the unfortunate results that have occurred in such cases show that Behring's original statement that the injection of his serum was as harmless as one of normal saline solution was too absolute. There is the much debated case of Prof. Langerhans's little boy, who died suddenly after a dose of antitoxin injected as a precautionary measure, the immediate cause of death not being satisfactorily accounted for. Other cases are given by Dr. Joseph Winters.[2] A healthy boy of 5 years was injected with a preventive dose of Behring's serum, and death occurred in five minutes (Halderman). A woman injected similarly with 600 units suffered from the most severe collapse for six hours. A boy aged 2 with spastic spinal paralysis, suffered from diarrhœa for four days after a preventive injection of 600 units, and died from collapse on the tenth day (Johannessen). A girl, in good health, aged 3, after an injection of 3 c.c., had a temperature of 104°, followed by albuminuria, hæmaturia, and a petechial rash, and died on the twentieth day (Alfoldi). In a girl aged 6, with slight angina, proved not to be diphtheritic, after a single injection the temperature rose to 105° on the sixth day, a scarlatiniform eruption appeared for the following four days, and death occurred in convulsions (Moizard and Bouchard). In some other cases severe symptoms followed preventive inoculations. Pistor[3] injected a girl aged 7, who suffered from tonsillitis in which diphtheria bacilli were absent, with 900 units of a serum, with the result that she suffered from a very protracted and variable illness, attended with fever with many remissions and exacerbations, and accompanied by exanthemata, the last of which appeared three months after the injection. These unfortunate results would appear to necessitate caution in the use of antitoxin as a preventive measure.

Drs. A. Seibert and F. Schwyzer,[4] however, as a result of experiments in the laboratory state: (1) That antitoxin serum does not seem capable of causing threatening symptoms or

[1] Quoted by Dr. Brannan, *Med. Rec.*, 1896, xlix. 900.

[2] Discussion at the New York Academy of Medicine. *Ibid.*, 877.

[3] *Deutsche Ärzte-Ztg.*, 1895, No. 24; abstract in *Centralbl. f. innere Med.*, 1896, xvii. 925.

[4] *N. York M. J.*, 1896, lxiii. 708; abstract in *Am. J. M. Sc.*, 1896, cxii. 216.

speedy death, even when brought quickly into the blood-stream in very large doses; (2) The carbolic acid used as a preservative must be in so weak solution as to be unable to cause the characteristic carbolic convulsions; (3) Even very small quantities of air, if injected, will cause severe disturbance and ultimate cessation of breathing, and to this cause the authors attribute the sudden deaths reported.

Dr. Winters[1] spoke unfavourably of the antitoxin treatment. He believes that in certain individuals there is a special susceptibility to antitoxin, grave symptoms or death resulting from a relatively small dose. The predominating symptoms are referable to the nervous centres, kidneys, heart, lungs, and the temperature. One feature of these symptoms, especially the pulmonary, is their late appearance. He brought forward forty-one fatal cases of diphtheria from the Willard Parker Hospital, in which antitoxin treatment was begun early in the disease, and had, in his opinion, an unfavourable influence. It is but right to add that in the same discussion Dr. Brannan, also of the Willard Parker Hospital, combated Dr. Winters's statements, stating that no special form of pneumonia had been observed, nor any *post-mortem* changes in fatal cases that could be attributed to antitoxin.

Dr. J. S. Billings, Jr.,[2] found in moderate and severe cases of diphtheria the blood corpuscles reduced in number, and only slowly regenerated. Leucocytosis occurs, except in very mild and in very severe cases, the increase in number of leucocytes being generally in proportion to the severity of the case. The percentage of hæmoglobin varies with the number of red corpuscles. In cases treated with antitoxin the decrease in the number of red corpuscles and in the amount of hæmoglobin is less than in cases not so treated. The leucocytosis is not affected. In healthy persons the injection of antitoxin causes in about half the cases a very moderate reduction in the number of red corpuscles and of hæmoglobin, and no change in the leucocytes. No peculiar characteristic changes in the morphology of the corpuscles were made out.

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The diphtheria antitoxin has also been tried in **scarlet fever,** thus: J. Noir[3] injected 10 c.c. diphtheria serum into a child of 8 years on the third day of an attack of scarlet fever, with severe croupous inflammation of the fauces. The throat quickly improved: desquamation began on the third day after the injection. The chief point of the case lies in the absence of albumen in the urine, and as this occurred in a case of scarlet fever, the author infers that the serum may be used without any fear of irritating the kidneys. Dr. Szegö[4] treated a case of

[1] *Loc. cit.* [2] *Med. Rec.*, 1896, xlix. 577.

[3] *Progrès méd.*, 1895, 3e Sér. ii. 145; abstract in *Centralbl. f. innere Med.*, 1896, xvii. 880.

[4] *Deutsche med. Wchnschr.*, 1895, No. 51; abstract in *Rev. de Thérap. méd.-chir.*, 1896, lxiii. 10.

scarlet fever sore throat of the gravest kind with Behring's serum. Amelioration took place in twenty-four hours, followed by a rapid cure. Bacteriological examination showed the presence of staphylococci and streptococci, but not of Löffler's bacillus. The author invokes Metschnikoff's theory, increased phagocytosis, due to the stimulating effect of the antitoxin, to explain his case.

* * * *

Injections of **anti-streptococcus serum** have been employed in scarlet fever, in erysipelas, puerperal fever, and acute septicæmia. This treatment must be considered as still on its trial, as it has not yet been employed in a sufficient number of cases to pronounce on its positive value. According to T. J. Bokenham,[1] "Antistreptococcus serum is serum obtained from the blood of an ass which has received during several months repeated and increasing injections of living virulent streptococci. It will be seen at once, therefore, that the principle involved differs in important respects from that involved in the preparation of antidiphtheria serum. In this last it is the toxins, formed by diphtheria bacilli in bouillon cultures, which are employed to set up immunity in animals furnishing the serum. Anti-streptococcus serum . . . . may be expected to possess antimycotic rather than antitoxic properties."

Dr. Alexandre Marmorek, seeing the invariable presence in **scarlet fever** of complications due to infection by streptococci, has treated the disease with anti-streptococcic serum. From October 16th to December 31st, 1895, 103 children suffering from scarlet fever entered the Hôpital Trousseau. Seven of these cases were not treated by the serum, because they were in the desquamative stage. Of the remaining ninety-six cases a bacteriological examination showed in all the presence of the streptococcus, either alone or associated with other microbes. In seventeen other cases Löffler's bacillus was also found. Four of these last cases, which were admitted with symptoms of diphtheria, died in spite of treatment by both the streptococcic and antitoxic serums. All the children received on admission an injection of 10 c.c. of antistreptococcic serum, which was doubled if the general condition was serious. Treatment was confined to serum injections and antiseptic washes for the throat. The injections were repeated daily until the temperature fell. If swollen glands or albuminuria appeared the injections were resumed, and continued until the condition had returned to the normal. In ordinary cases 10 c.c. to 30 c.c. were injected; in more serious ones 40, 60, 70 c.c., and in one child of 4, with scarlatinal rheumatism, who recovered completely, 90 c.c. The most striking effect was on the swollen glands; in nineteen cases with this complication, resolution occurred in all without suppuration. In four children who

[1] *Brit. M. J.*, 1896, ii. 4.

[2] These quantities represent the total amount injected during the illness.

were admitted with suppurative otitis, the serum promptly stopped the purulent discharge. The advantages claimed for this treatment are—the prevention of grave complications, the rapid disappearance of false membranes, relief of delirium, improvement of the general condition, and a fall of temperature if fever be caused by complications due to streptococci. The fever caused by the scarlet fever virus pursues its ordinary course, as does the eruption, supporting the view that the disease is not caused by the streptococcus.[1] A later report says that Marmorek has treated 411 patients with a mortality of 3.4 per cent.

Baginsky[2] said he had used the serum of Marmorek in fifty-seven cases, from which nine must be deducted as the treatment was not fully carried out. In twenty-seven cases a fall of fever followed the injection, though, as this is sometimes observed in cases not so treated, it cannot be directly attributed to the serum. The sore throat and enlarged glands yielded in from three to five days, inunctions of iodine ointment being also used for the latter. In sixteen cases the serum treatment was entirely inefficacious. Some cases died from intensity of scarlet fever poison, in spite of the injection of maximum doses of the serum. In other less serious cases, suppuration of the cervical glands occurred. There remain five cases in which single injections were employed merely to combat complications, and with good results. The total mortality during the serum treatment was 14 per cent., instead of 22—24 per cent. in the previous period, too small a difference on which to base a favourable conclusion.

Dr. Dubois of Lille[3] also finds that injection of the serum causes an abrupt fall of the temperature if the fever be due to the streptococcus and not to scarlet fever poison. A dose of 10 c.c. is sufficient. The throat cleans rapidly, glandular swelling and otitis are relieved, and he considers that albuminuria may be prevented by use of the serum from the first.

M. Josias[4] has used two kinds of anti-streptococcic serum; one prepared from the sheep, the other from the horse. In the first series 49 children were injected with an average dose of about a drachm without accident, save some urticarial eruptions. In the second series 96 children received from two to eighteen drachms, resulting in various complications, among which were streptococcic abscesses, lymphangitis, and polymorphous eruptions. With sheep-serum the mortality was 2.08 per cent.; with horse-serum, 5.31 per cent.; with ordinary treatment as before serum it was 5.81 per cent. There were no serious results. He con-

[1] *Ann. de l'Inst. Pasteur*, 1896, x. 47.
[2] *Med. Week*, 1896, iv. 143.
[3] *Bull. méd. du Nord*, April 10, 1896; abstract in *Rev. de Thérap. méd.-chir.*, 1896, lxiii. 368.
[4] *Presse méd.*, 1896, No. 42; abstract in *Am. J. M. Sc.*, 1896, cxii. 470.

siders that the serum apparently acts upon streptococci, which do not cause suppuration.

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On the other hand, Dr. Variot[1] found in ten cases of children affected with **membranous tonsillitis**, in whom he injected 10—20 c.c. of the serum, the results so grave that he has abandoned its use. The temperature was raised two or three degrees for some hours, the children became prostrate with dry tongue, and an abscess formed in the abdominal wall even when the injections were made with due antiseptic precautions.

M. Comby also states[2] that the mortality of this disease treated by Marmorek's serum was 8 per cent., whilst in the same pavilion the previous mortality was 5 per cent. Not only did the anti-streptococcic serum fail to lower the mortality, but it did not prevent the complications due to the streptococcus.

Prof. Petruschky[3] states that his repeated experiments of Marmorek's anti-streptococcic treatment do not confirm the statements given by the latter, and that there is yet no certain proof of the possibility of a serum-treatment against streptococcus infection. No protective influence could be obtained against "Marmorek's streptococcus" nor against two equally virulent organisms cultivated by Petruschky, either with Marmorek's serum or with that prepared by Niemann of Lyons after the method of Marmorek. He also, as the result of experiments on animals, advises against the practical application of the serum.

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M. Deléarde,[4] of the Institut Pasteur de Lille, on the use of Marmorek's anti-streptococcic serum in **erysipelas**, says, first, that it is non-toxic, and has been used in new-born infants without any harm; it may be used in large doses. In erysipelas, as soon as the diagnosis is made, 10 c.c. of the serum are to be injected into the subcutaneous cellular tissue of the flank: benign cases are generally cured by one dose; if not, a second dose is injected after an interval of twenty-four hours. The temperature and the pulse are the guides to the need for repeating the dose. The effects of the serum show themselves from the fifth to the twelfth hour in a fall of temperature and pulse-rate, relief of headache, disappearance of albumen from the urine, and in improvement of the local signs. Occasionally, twelve hours after injection, a little pain, redness, and sometimes œdema, appear at the site of puncture, but as a rule these pass away without any trouble. Two or three hours after the injection there is a rise of temperature, which rapidly falls

[1] *J. de Clin. et de Thérap. inf.*, 1896, No. 23; abstract in *Rev. de Thérap. méd.-chir.*, 1896, lxiii. 368.

[2] *J. des Praticiens*, 1896, No. 20; abstract in *Am. J. M. Sc.*, 1896, cxii. 216.

[3] *Centralbl. f. Bacteriol. u. Parasitenk.*, 1896, Bd. 20, No. 4/5, & *Ztschr. f. Hyg. u. Infections-krankh.*, 1896, Bd. 22, No. 3; abstract in *Wien. klin. Wchnschr.*, 1896, ix. 877.

[4] *Nord. méd.*, 1896, iii. 17; abstract in *Rev. de Thérap. méd.-chir.*, 1896, lxiii. 332.

again. Desquamation begins early and is in large shreds. As said above, when the case is mild and injections are begun early, a single one is sufficient; if it is further advanced the fever yields more slowly, and cases of ambulant erysipelas usually need repeated injections.

At the Vienna Medical Society, Prof. Chrobak[1] described three cases in which anti-streptococcic serum was employed. The first case was one of erysipelas in a lying-in woman, who recovered in three days. In the second case symptoms of sepsis came on in a woman after operation for myoma; 30 c.c. of serum were injected within two days, after which her condition improved. In the third case, one of puerperal fever, 25 c.c. were injected in three days: the fever and rigors continued until after the last injection; but on the next day the fever rapidly decreased. Prof. Chrobak has not formed a definite opinion as to the value of the injections, but believes them to be harmless.

M. Bolognesi[2] criticises the results obtained by Chantemesse in the serum-treatment of erysipelas. He points out that many cases are remarkably mild, and that the mortality varies with the time of the year and the form of the affection present. He gives an account of 1000 cases at the Hôpital d'Aubervilliers, in which the total mortality was 3.5 per cent. In cases under different forms of treatment, but with no very bad ones, the mortality was .9 to 1.2 per cent. These last may be compared with those of M. Chantemesse, in which the mortality was 1.7 per cent. in those treated by *sérum efficace*, and was 1.03 per cent. in those treated by *sérum très efficace*. The general result of the serum-treatment of erysipelas gives a mortality of 2.59 per cent., and may be compared with the general mortality of the disease varying from 2—4 per cent. He considers that the serum-treatment, to be properly tested, must be tried on acute, severe cases, the mild ones being rejected.

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Anti-streptococcic serum has been used in **puerperal fever**.[3] Dr. Ledrain[4] has recently reported a case in which the condition on the ninth day after delivery was as follows: Temperature 104°, pulse 148, small, compressible, tympanites and tenderness of abdomen, fœtid diarrhœa, dryness of tongue, and quiet delirium. 5 c.c. of anti-streptococcic serum, obtained from the Institut Pasteur, were injected. Next day the temperature had fallen to 101.3°, the pulse to 120. Six injections of 5 c.c. each time were made daily for five days, then an interval of a day was left and the last injection given. On the day following the third injection the temperature was 104°, the pulse 130, and there was some redness and swelling at the site of the first injection; the next day this had disappeared, and the patient made an uninterrupted and complete recovery.

[1] *Lancet*, 1896, i. 75.
[2] *Progrès méd.*, 1896, 3e Sér. iii. 106.
[3] See *Bristol M.-Chir. J.*, 1895, xiii. 139. [4] *Progrès méd.*, 1896, 3e Sér. iii. 227.

Dr. McKerron[1] reports three cases of puerperal fever thus treated. The worst case died, the others recovered. In the former four injections of 10 c.c. were given; in the two latter, three and two injections respectively: the injections were made into the arm, and in one of the successful cases tenderness at the site of injection and an erythematous rash over the limb were noted; no other symptoms due to the injections were observed. The author thinks that the good effects of the serum were shown in improvement of the pulse and subjective condition of the patients.

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Messrs. Ballance and Abbott report[2] a case of **acute hemorrhagic septicæmia** treated by anti-streptococcus serum. The patient, a medical man, pricked his thumb whilst making a *post-mortem* examination on a case of suppurative peritonitis. Pain and swelling of the thumb began the same evening. The day after the temperature was 103° F.; there was a scarlet septic erythema over the whole body, the pulse was rapid and soft, and there was drowsiness, with shooting pains in the arm. Next day the condition was worse, the temperature being 104.7°, the pulse 150, with rapid respiration and increased drowsiness. 3.5 c.c. of anti-streptococcus serum (Burroughs, Wellcome & Co.) were injected every four hours; after eight injections, 7 c.c. were used; twenty-eight injections were made in all. The patient gradually recovered, the temperature reaching the normal on the twelfth and thirteenth days. The effect of the serum was shown in that (1) the mind became clear in spite of high fever; (2) frontal headache ceased; (3) the tongue began to clean; (4) the pulse became slower and stronger and the respiration slower; (5) the skin became moist; (6) the wounds healed without suppuration.

Two cases of blood-poisoning, in which the symptoms were severe, were treated by injections of anti-streptococcic serum by Messrs. A. H. and A. R. Cook[3] with good results; in the second case the effect of the serum is doubtful, as the injections were not made until three weeks after the local infection.

Another case of recovery from acute septicæmia after injections of anti-streptococcic serum is reported.[4] Mr. L. Strangways Hounsell relates[5] the case of a boy in whom a tooth was removed for alveolar abscess, and who was taken shortly afterwards with severe symptoms of septicæmia. His temperature was 104.5°, the pulse 156; at first delirious, he shortly afterwards became unconscious, with loss of control over micturition and defæcation. He was treated with injections of anti-streptococcic serum, with remarkable results; very soon after the injections the boy got better, and ultimately completely recovered.

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Dr. W. H. Weaver[6] has used anti-streptococcus serum in the

[1] *Brit. M. J.*, 1896, ii. 1033. [2] *Ibid.*, 2. [3] *Ibid.*, 1315. [4] *Ibid.*, 647.
[5] *Clin. J.*, 1896, ix. 46. [6] *J. Am. M. Ass.*, 1896, xxvii. 542.

treatment of three advanced cases of **pulmonary phthisis**, with the result of reducing the pyrexia and the amount of expectoration.

J. MICHELL CLARKE.

In a measure confirmatory of the recent discovery of bacilli in **rheumatoid arthritis**, as recorded in the *Lancet* of April 25th, 1896, are the observations of MM. Chauffard and Ramond.[1] In a case of undoubted rheumatoid disease they found micro-organisms presenting the characteristic appearances of diplobacilli, short and thin, and which they state resemble the diplococci of Talamon. The organisms were found in the synovia and stained easily with all the ordinary reagents, but cultivation and inoculation experiments failed, as was possibly to be expected from the difficult nature of the organism and from the scarcity of material at their command.

Schüller,[2] who has also described an organism in this disease, mentions in his more recent writings the discovery of another micro-organism having many of the characteristics of the bacillus prodigiosus, and one therefore more nearly resembling that described in the *Lancet* than did the previous one.

G. A. BANNATYNE.

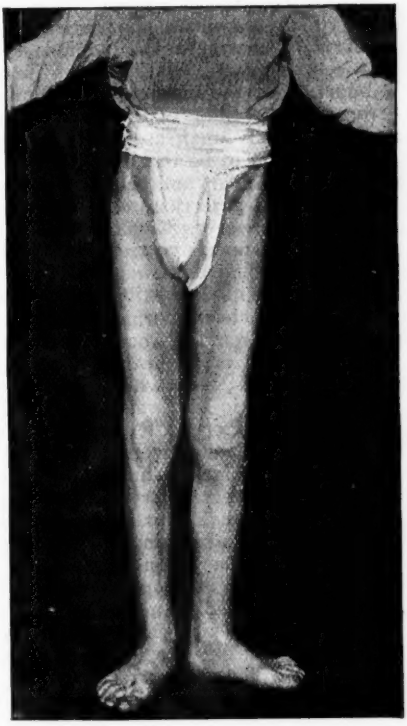
SURGERY.

Diseases of the hip-joint still require elucidation, but Professor Ogston[3] has advanced them a stage by the publication of several cases of "coxa vara"—a name first suggested by Hofmeister[4] in 1894 for this disease, which was described by Müller[5] in 1889.

From time to time one comes across cases which have a great resemblance to the ordinary morbus coxæ of childhood or young adult life, but which are sufficiently atypical for us to enter them in our case-books with a note of interrogation after them. I find that during the past four years I have seen some half-dozen of such cases, and which I have been disposed to regard—in the absence of other explanation—as of a "rheumatic" nature. The first case that impressed me was in a boy of about twelve years of age, who complained of pain in the right hip and knee of a few weeks' duration. He walked with the usual limp, and the limb was wasted and everted, but there was an absence of that alteration of the gluteal and inguinal folds, of lordosis, and of abduction associated with eversion which characterise a typical case of morbus coxæ. The child was put to bed, and improved; but it was thought desirable to order a Thomas's splint at the end of a week or ten days. He could not, however, be kept quiet, and in the course of a few weeks was brought back apparently well. The condition, however, recurred, and such recurrence—or more often exacerbation and remission without complete intermission—has been a

[1] *Rev. de Méd.*, 1896, xvi. 345.
[2] *Méd. mod.*, Feb. 22, 1896. [3] *Practitioner*, 1896, lvi. 347.
[4] *Beitr. z. klin. Chir.*, 1894, xii. 245; 1895, xiii. 289. [5] *Ibid.*, 1888–9, iv. 137.

marked feature of those cases of which I have had experience. Coxa vara appears to be due to a downward curvature of the cervix femoris, of rachitic origin—as shown by the existence of "beaded ribs" and other signs of rickets. Ogston[1] says he has never found the enlargement of the ribs absent, and therefore rightly regards this objective evidence as of great diagnostic importance in these cases. The symptoms usually present in coxa vara are suggested by the case referred to above, but reference may be made to others which Prof. Ogston points out on the authority of Hofmeister, corroborated by his own observations. The disease, which may affect one or both hip-joints, comes on gradually, and usually occurs between the ages of thirteen and eighteen. The pain, which also affects the knee, is increased on standing and walking. The curving of the neck of the femur causes a shortening of the limb above the trochanter, varying from one to three inches. This is best demonstrated by means of the well-known Bryant's triangle. Eversion of the limb is present in most cases; but Hofmeister lays stress on the absence of abduction, which is present in those cases of hip-disease which are likely to be confounded with coxa vara. (A well-marked example of this disease is shown in the accompanying picture,[2] taken from a patient who was in the Aberdeen Royal Infirmary last year.) The power of abduction is generally diminished or abolished; "and the range of rotation at the



[1] *Loc. cit.*

[2] I am indebted to the courtesy of the Editor of the *Practitioner* for the loan of the block.

hip-joint, without being lessened, is simply displaced outwards." Signs of rickets, such as enlarged bones, and sometimes genu valgum and talipes valgus, are present. The persistence of the disease has been referred to, and when at the end of a few months to as many years the pain disappears, the deformity still remains. Professor Ogston also states that in his experience these cases do not exhibit that marked flexion of the hip-joint which is so common a feature in cases of morbus coxæ; so that in cases of coxa vara we find that when the knee of the *sound* side is pressed against the thorax, the popliteal space of the *diseased* side can easily be pressed into contact with the couch on which the patient is lying. (Thomas's test.) This is, of course, impossible in cases of morbus coxæ. I have noticed, similarly, that whereas in morbus coxæ flexion and abduction of the diseased limb cause great pain (presumably from the stretching of the round ligament), cases of coxa vara are practically unaffected. Rest, extension, and tonics (phosphorus) seem to be the best means of treating this interesting disease. Müller and Hoffa,[1] although they obtained good results from resection, consider the operation unjustifiable. Recently, however, Kraske[2] has published a case which he subjected to operative treatment in the belief that the cervix femoris is "bent downwards and at the same time backwards, so as to have its convexity upwards and forwards."[3] He made a two-inch incision, "which began at a point a little upwards and inwards from the trochanter tip and was carried downwards in the long axis of the limb at the outer edge of the tensor vaginæ femoris, and which was deepened until the anterior intertrochanteric line was reached, the periosteum in front of the base of the cervix femoris was divided and pushed off the neck upwards towards the caput for about an inch, without opening the joint. Through this wound a wedge of bone, whose base, directed forwards and upwards, was about three-quarters of an inch broad, was chiselled out of the bone at the base of the neck, severing the cervix from the rest of the femur. The deformity was at once, according to Kraske, overcome and the limb placed in proper position; and the case, treated by distraction, was so far healed at the time of his report that the bone had united and the joint was movable, and the opposite side, which was likewise diseased, was about to be operated upon forthwith."[4] The importance of a due recognition and differentiation of this new affection of the hip-joint is manifest, for the prognosis — and treatment, for that matter — is essentially different from that of morbus coxæ; and its diagnosis is not difficult now that its objective signs have been made known. Karl Baur has recently issued a small monograph[5] on this subject.

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[1] Quoted by Prof. Ogston. [2] *Centralbl. f. Chir.*, 1896, xxiii. 121.
[3] *Practitioner*, 1896, lvi. 358. [4] *Ibid.*
[5] *Ein Beitrag zur Casuistik der Coxa vara.* 1895.

The **surgery of the vermiform appendix** has frequently been referred to in this *Journal*, but it is only by the patient accumulation of the evidence of experience, and reviewing our position from time to time, that we can proceed with a prospect of obtaining the best results. Already there are indications of the adoption of a compromise between the comparatively late operation of English surgeons and the immediate resort to operative interference of the Americans. Most surgeons are agreed on the necessity of operating under certain circumstances, such as the presence of pus, in cases of relapsing appendicitis, and so forth; but many points remain unsettled, and one that has recently been exercising the minds of some of the American surgeons is whether the appendix should be removed in every case of appendicular abscess or not. In a paper[1] read before the Bath and Bristol Branch of the British Medical Association in 1894, I stated that the rule should be to take the appendix away "if it can be removed without increasing the danger to the patient," but that "it would be far wiser not to attempt the removal of the appendix at all, than to run any great risk of opening the general peritoneal cavity in the separation of adhesions." Since then many heated discussions have gathered round this point, some supporting the view here mentioned, and others urging the removal of the appendix under all circumstances. One writer says[2]: "It is my practice to remove the appendix in all cases. Certain it is that by the proper disposition of gauze and careful attention to technic, an appendix which is deeply embedded in a wall of lymph, whether it makes a portion of the abscess-cavity or not, can be removed, and the dangers which attend its removal are far less than those which occur when it is allowed to remain. A practice which I believe is a frequent one is simply to evacuate the collection, there being no attempt made to remove the appendix if it be not plainly visible. This I consider, with all due deference to the surgeons who practise it, incomplete surgery." On the other hand, we hear[3] that "In many cases of circumscribed abscess, and especially in those in which the appendix is bound down by adhesions in the depth of the wound, the surgeon should be content with evacuation, irrigation, drainage, and packing with iodoform gauze. Persistent search for the appendix and attempts at its removal in these cases are attended with such danger of opening the general peritoneal cavity that they are not to be recommended." Dr. William White has taken much pains to collect evidence which, in the sequel, will, I think, be shown to settle this thorny question; and the paper[4] which he read at the College of Physicians of Philadelphia brought out the opinions of many of

[1] *Bristol M.-Chir. J.*, 1894, xii. 9. [2] *Med. News*, 1895, lxvii. 677.
[3] *An American Text-Book of Surgery*. Edited by W. W. Keen and J. W. White. 2nd Edition, 1895, p. 746.
[4] *Ann. Surg.*, 1896, xxiii. 759.

the leading American surgeons on this point. Most operating surgeons will agree with Dr. White that there is ample proof that it is absolutely impossible to remove the appendix "in all cases" with less danger than would ensue if it were left, and the literature of the subject is full of cases where no harm has followed when the appendix has been left behind. Fowler has reported[1] seventeen such cases which recovered, and of these two only had a recurrence within the next two years, and some of them had gone for three or four years without any return of the symptoms. Richardson, too, reported[2] forty cases in which he did not remove the appendix, recovery taking place in nearly every instance, all fæcal fistulæ ultimately healing, and subsequent trouble occurring only in two cases. Speaking of the 181 cases which he reported, Richardson says[3]: "Most surgeons believe that in cases of localized peritonitis no attempt should be made to separate the adhesions for the simple purpose of removing the appendix. I have no doubt whatever, from my own experience and from what I have seen of the work of my colleagues, that it is extremely dangerous to break down the barriers between an appendicular abscess and the rest of the peritoneal cavity." It is impossible in many instances, even with the greatest care, to avoid infecting the peritoneal cavity. Treves, too, is of much the same opinion, and says[4]: "As the surgeon, therefore, reaches what appears to be the starting point of the peritonitis, he must proceed with the utmost caution, and be not only prepared, but rather inclined to leave the actual *fons et origo mali* undemonstrated. . . . If the operator can rid the serous cavity of the effects of the perforation, he may very often leave the breach itself to be dealt with by natural means." Dr. White, in his paper,[5] quotes the opinion of some American surgeons to whom he submitted the question. Dr. McBurney said: "There are certainly some cases, not few in number, in which the appendix is so deeply embedded in the wall of the abscess, or so difficult to define at all, that to insist upon its discovery and complete removal would be to incur quite unjustifiable risk. . . . The accomplishment of this desirable result may, however, in some cases be accompanied by such great prolongation of the operation under unfavourable conditions, and by such great danger of seriously infecting fresh peritoneal surface, that one had better be content with properly evacuating, cleansing, and packing the cavity, leaving the appendix or its remnant to be disposed of by its obliteration in the wound-healing, or by its removal at a later and more favourable time through a second operation." Dr. Bull said that in cases operated upon after the seventh to the tenth day, or in "those where the

[1] *Ann. Surg.*, 1894, xix. 569.
[2] Quoted by White from *Boston M. & S. J.*, 1892, cxxvii. 105.
[3] *Am. J. M. Sc.*, 1894, cvii. 9. [4] *Brit. M. J.*, 1894, i. 519.
[5] *Loc. cit.*

abscess is distinctly circumscribed with firm walls and containing several ounces of pus, I have not attempted to remove the appendix. In many of those last mentioned it is found as a slough of the mucous membrane and in the pus. . . . The plan of always looking for the appendix is fraught with the risk of infecting the healthy peritoneum beyond the barrier of adhesions,—an immediate danger; the plan of leaving it under the circumstances mentioned exposes only a small proportion of patients to risk of subsequent attack or fistula, both remote dangers which can be met by secondary operations." Dr. Senn said: "It has been my habit for years in cases of acute appendicitis with extensive suppuration to simply incise, disinfect, and drain the abscess, unless the diseased appendix could be removed without any additional risk. I have seen a number of such cases recover permanently without any additional surgical interference. I regard persistent search for the appendix in such cases hazardous, as it often results in opening into the free peritoneal cavity and fatal septic peritonitis." Dr. Halsted said: "If there is only one abscess, and it can be evacuated without entering the uninvolved part of the peritoneal cavity, I almost invariably treat it simply by incision and drainage." Dr. Richardson said: "I have no doubt whatever that many cases which under conservative methods would recover are converted into cases of fatal general peritonitis by removing the appendix when it forms part of the wall of an abscess cavity. . . . I am fully convinced that many cases that are reported as cases of hopeless general infection are made hopeless and general by the rash methods frequently advocated to-day. In a localized abscess, especially if it has been going on a week or two, and the walls are firm, separation of adhesions, in my judgment and experience, is inadvisable,—more than inadvisable,—it is entirely unjustifiable. In a very large number of cases I can recall but two or three in which simple evacuation and drainage without removal of the appendix have not been followed by a cure thus far permanent. The ideal method of treating these cases is to tide the patient over the existing emergency by simple drainage, and, after permanent recovery has taken place, to remove the appendix." Such evidence is surely sufficient, and, as Dr. White says, it is "in accord with both clinical experience and surgical principles." The conclusions here set forth are practically the same as those expressed by Rutherford Morison,[1] Mitchell Banks,[2] Jordan Lloyd,[3] MacDougall,[4] and other surgeons who took part in the recent discussion on this subject at the meeting of the British Medical Association at Carlisle. It is obviously desirable to remove a diseased appendix when one can do so without increased danger to the patient; but to admit this is very different from suggesting that the appendix should be removed

[1] *Brit. M. J.*, 1896, ii. 1005. [2] *Ibid.*, 1007.
[3] *Ibid.*, 1005. [4] *Ibid.*, 1003.

in all cases. The fact is, as Dr. McBurney has pointed out,[1] that in cases of suppurative appendicitis we find we have to deal with two classes of abscess, which differ considerably in their management. In one kind we find the abscess has approached the parietes to such an extent that the abscess cavity can be opened—though frequently with some difficulty—without entering the general peritoneal cavity. All further manipulations are therefore made from the inside of the abscess cavity, the wall of which separates the infective pus from the general peritoneal cavity. Now, in such a case as this, where the appendix practically forms a portion of the abscess wall, an attempt to remove it would probably expose the patient to the risk of general peritoneal infection,—an inflammation of so fatal a character that, after what has been said, it would not be justifiable to expose the patient to it. It is true that by means of gauze we may often succeed in keeping the peritoneum free from infection in cases where the risk is considerable; but when we find that an appendix when not removed generally quiets down after the opening of the abscess, we must regard any interference with it, under the circumstances now referred to, as mischievous. In the other class of cases the abscess does not approach the parietes, but the abscess cavity and appendix are surrounded by agglutinated coils of intestine so that the whole mass lies more or less free in the peritoneal cavity. In operating on such cases we must necessarily open the general peritoneal cavity, and then by means of gauze and sponge packing we endeavour to isolate the affected coils of intestine from the general peritoneal cavity. We must then proceed to unravel the coils of gut until we come down on the imprisoned appendix and the surrounding abscess. In these cases the appendix can be, and we might say should be, removed; for it is generally under these circumstances easily isolated, and its isolation is a necessary part of the means taken for evacuating the abscess. The sponge packing enables us to keep the infected portions of intestine more or less under control; but the mortality in these cases is generally higher than in the former ones (provided that no attempt has been made to remove the appendix when it forms part of the abscess wall itself), on account of the anatomical relations of the abscess, which are necessarily more likely to allow of a general peritoneal infection.

* * * *

The trite subject of the treatment of **buboes** following soft chancres is still one of interest both to the patient and the practitioner. These cases are of a most tedious character when treated by ordinary means, so that surgeons have been led to advise the excision of the affected glands whether suppurating or not. Such treatment, if one obtains union by first intention, undoubtedly shortens the ordinary duration of the disease; but

[1] *Ann. Surg.*, 1896, xxiii. 751.

I have been so impressed by the dangers of the operation, which involves an extensive dissection in the neighbourhood of the saphena and femoral veins, that it seems unjustifiable to adopt such radical measures in an uncomplicated case. We must reserve this procedure for such cases as have proved intractable to other means, or the slight mortality of buboes will be largely and unnecessarily increased. Dr. Clifford Perry [1] has recently had this subject under review, and considers that the best treatment of non-suppurating buboes of chancrous origin is by the intra-glandular injection of a one per cent. solution of benzoate of mercury—a method of treatment first advocated by Welander,[2] who claimed to have cured fifty-six out of seventy-eight cases without suppuration; and as the usual percentage of buboes which suppurate is about 42 per cent.[3] of the whole number, this result was extremely good. Dr. Taylor [4] recommended the injection of a solution of carbolic acid (twenty to forty minims of a solution of ten grains to the ounce), and said a cure was effected in eight to ten days, and Harvey [5] supported him; but this method, like that of the injection of bichloride of mercury, does not seem to have stood the test of time. If all that Perry [6] claims for the benzoate of mercury treatment be corroborated by further trials, we shall have a most useful addition to the treatment of these chancrous glands. He employs this remedy not only in the non-suppurating cases, but also in those in which suppuration is threatening, so long as fluctuation is not actually present. About twenty or thirty minims are injected at one or more points into the gland substance. This causes a burning pain for two hours, and generally some fever (99° F. to 104° F.) lasting for a few days. "In two or three days after the commencement of treatment the bubo is much diminished in size and resolution is taking place." A small quantity of pus generally forms in the centre; this is relieved by incision and the application of an antiseptic dressing. "In a few days all discharge ceases, the remaining induration rapidly subsides, and the bubo is cured." In twenty-two unselected cases treated by this method, he found the average time necessary to effect a cure to be about fourteen days. This is less than half the time usually occupied by cases that are excised; but is about the same time as that claimed by Woodward,[7] who advocates early incision and packing with iodoform gauze. As regards the treatment of suppurating buboes, Perry's conclusions are much the same as those of most of us. He finds simple incision, or incision and *curettement*, to be more or less slow; but, as already suggested, these means though slow are very safe. The best method of all, however, for these cases is one which is often

[1] *Am. J. M. Sc.*, 1896, cxii. 571.
[2] *Arch. f. Dermat. u. Syph.*, 1891, Heft 3, quoted by Perry.
[3] *International Encyclopædia of Surgery*. Edited by John Ashhurst, Jr., M.D., 1882, ii. 436.
[4] *Am. J. M. Sc.*, 1882, lxxxiii. 359. [5] *Med. News*, 1886, xlviii. 98. [6] *Loc. cit.*
[7] *Rep. Superv. Surg.-Gen. Mar. Hosp.* for 1892, p. 125.

applied to chronic abscesses, viz., the evacuation of the pus, followed by distension of the cavity with a ten per cent. mixture of iodoform in vaseline. This, though not new then, was advocated by Hayden in 1895.[1] Personally, I prefer a ten per cent. emulsion of iodoform in glycerine. One or two injections are generally sufficient, and the majority of cases get well in the course of two or three weeks. It is only when these milder means have failed that we should adopt *curettement*, or the more serious operation of excision.

JAMES SWAIN.

LARYNGOLOGY.

Mayo Collier[2] says that the effects of **chronic nasal obstruction** are: (1) dryness of the mouth and tongue in the morning, from breathing through the mouth during sleep, and this due to enlargement of the erectile tissues on the lower turbinated bone, known as turbinal varix; (2) disturbed sleep, and in children nightmare; (3) night cough from the effect of cold, dry, and unfiltered air entering the larynx and trachea; (4) morning cough and expectoration from engorgement and congestion of the mucous membrane of the trachea and larynx, due to the dry-cupping of the parts during the abnormal and impeded respiration; (5) hoarseness and pharyngeal, laryngeal, and post-nasal catarrh; (6) enlarged, inflamed, and morbid conditions of the tonsils oral, pharyngeal, and lingual; (7) deafness, dry catarrh of the tympanum, suppuration of the middle ear; (8) polypus of the nose and naso-pharynx, anterior and posterior hypertrophies, spurs, ridges, and turbinal varices, due to the chronic state of enlargement and irritation to which the parts are subjected by the ever-present diminished nasal tension and want of ventilation; (9) affection of the accessory sinuses of the nose; (10) effects on distant parts, *e.g.* chest-walls, spine, lung, &c. He also draws attention to the correct way to test the nasal respiration; viz., by telling the patient to *inspire* through the suspected nostril, closing the other one and the mouth. If he can exist for a minute or two without opening his mouth, there is no material degree of nasal obstruction

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Bryson Delavan reports a case[3] of **multiple papillomata affecting both vocal cords**, in which the use of instruments was not desirable, which was completely cured by using a spray of alcohol. The patient sprayed the larynx six times a day for over four months.

These cases of multiple and often sessile papillomata are very difficult to treat, as it is impossible either to snare them off or to tear them away with forceps. I have used the galvano-cautery, but this is not a safe instrument to apply to the interior

[1] *Am. J. M. Sc.*, 1895, cx. 519. [2] *J. Laryngol.*, 1896, x. 117.
[3] *Ibid.*, 146.

of the larynx. The alcohol treatment may help us in this difficulty, and we know what it will do for aural polypi.

* * * *

Mr. Watson Cheyne states[1] that **cancer of the pharynx** commences in 60 per cent. of the cases on the surface of the tonsils, and, as it causes little trouble in its early stages, is very apt to be overlooked. He has tabulated all the published cases in three groups, according to the extent of the disease or the method of removal: *Group I.* Where the disease was removed from the mouth with or without splitting the cheek and with or without tracheotomy—where there was no wound in the neck communicating with the mouth. *Group II.* Where the internal wound communicated with a wound in the neck. *Group III.* Where the disease involved both the pharynx and larynx. Reference should be made to Mr. Cheyne's elaborate statistics, which show that the mortality varies greatly in the different groups. If tracheotomy is necessary, there is nothing gained by performing it some days before the principal operation for removal of the growth. The lymphatic area ought to be freely cleared out, and the internal jugular ligatured and resected if any glands are adherent to its sheath. The external carotid was tied in some of the operations, but there is then risk of secondary hemorrhage. Septic pneumonia is also a cause of death, which has to be reckoned with. Leaving the external wound fully open will, probably, lessen this.

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A discussion on **intratracheal injections** in diseases of the respiratory tract took place at the March meeting of the New York Academy of Medicine.[2] Most of those who spoke on the matter considered astringents, stimulants, and antiseptics could be applied with advantage by means of a suitable syringe to the mucous surface of the trachea and bronchi, especially volatile oils in oily media. Relief of harassing cough, absorption of inflammatory swellings, and cleansing of ulcerated surfaces follow this method of medication.

* * * *

Felix Semon[3] has given us the important points in connection with **malignant disease of the larynx.** It is always primary, never secondary or metastatic, or attacks the larynx by contiguity only; it is most commonly epithelioma, sarcoma being very rare in this situation. It is much more often seen in males than females, and most of the cases occur between the ages of forty and seventy years. In intrinsic disease the vocal cords are most frequently first affected, and the great symptom is hoarseness, which may persist for months, or even a year or more, without any other symptom being present. Pain may or may

[1] *The Objects and Limits of Operations for Cancer*, 1896.
[2] *J. Laryngol.*, 1896, x. 319. [3] *Clin. J.*, 1896, vii. 265.

not make its appearance even up to the time of death. Slight and repeated hemorrhage is very characteristic, but may be absent. The disease may commence as simple congestion, followed by swelling, or may assume at once the form of diffuse swelling. It may begin as a globular, sessile, nodulated mass, or look like simple papilloma or fibroma. One very important point to remember is the localisation of the growth, which, if benignant, tends to be in the anterior parts of the vocal cords, and, if malignant, on the posterior parts, the interarytenoid area, the epiglottis, or aryteno-epiglottidean folds. The appearance, too, is different in the two classes of growth: the malignant growth is whiter in colour and the individual projections of it are much more pointed than is the case in the innocent ones. The impairment of mobility of a vocal cord is not a necessary accompaniment of malignant growth, because in its early stages it may be superficial. The average duration of life in cancer of the larynx is between two and three years. The cases most favourable for operation are those in which there is a definite tumour of one cord. Where the disease is too advanced for thyrotomy, a part or half of the larynx must be extirpated, and the cases most suitable for operation are those in which the disease is situated on the front parts of the larynx. Early tracheotomy is the best palliative where operation is not permissible.

It is the *early diagnosis* of these cases that is so very desirable, and where we have to do with a growth in the posterior parts of the larynx, whether on the cord or behind it, we should most carefully look for impairment of mobility of the cord *when the patient is quietly breathing*. Those of us who are constantly dealing with laryngeal cases know how difficult it is to distinguish between an epithelioma and pachydermia laryngis at a certain stage of both diseases; and amongst other points of difference is this one of impairment of mobility, which must never be overlooked.

* * * *

Holloway[1] writes in favour of using nitrous oxide gas, alone or mixed with a small quantity of ether vapour, as an **anæsthetic in operations on the throat** and nose. He quotes over 4,000 cases in which this plan has been followed without bad result. He directs attention especially to the fact that we can operate with the patient in the sitting position if we use this anæsthetic, which is, of course, impossible with chloroform; and he claims the following advantages for this position: (1) We can easily reflect light into the mouth by means of the frontal mirror, and so control the steps of the operation. (2) It is quite safe for the patient. (3) Hemorrhage can be well controlled, because we can see its source, and by bending the head forward the blood easily runs out of the mouth and does not tend to find its

[1] *Med. Mag.*, June, 1896; abstract in *J. Laryngol.*, 1896, xi. 128.

way into the larynx. If chloroform is used, "Krohne's improved regulating inhaler" is very valuable, as it enables one to measure the amount of the anæsthetic given with such accuracy. Deep narcosis not being necessary for the operation of tonsillotomy or removal of adenoid growth, the cough reflex should not be abolished. In the last twelve cases in which chloroform has been given by the author, the average amount of the anæsthetic used was 18.5 minims for every *five minutes* during which anæsthesia was maintained.

I have operated on about twenty cases of adenoid growth with nitrous oxide, or this gas and oxygen mixed, as the anæsthetic, and with the patients in the sitting position; and with one of these patients had more anxiety, from the fact of blood or growth falling into the larynx directly the operation was over and before I could bend the head over a basin, than I have had in hundreds of other cases operated on in which chloroform was employed, and in which I have never had any anxiety in this operation from blood finding its way into the air-passages; and I always operate with the patient turned well over on to the right side, with the head hanging over the edge of the bed or table. The blood flows out of mouth and nose quite freely and breathing is not at all obstructed.

BARCLAY J. BARON.

OTOLOGY.

Cerebral abscess following middle-ear disease is almost always the result of a *chronic* suppuration; so that we are generally able to assure a patient with recent acute suppuration, no matter how severe, that brain abscess is not likely to occur. Politzer says: "The otitic cerebral abscess usually develops as the result of chronic suppuration of the middle ear, very seldom in the course of acute purulent inflammation of the middle ear."[1] Gowers also remarks that, "The ear disease [which causes brain abscess] is usually chronic, and has existed for several years—five, ten, fifteen, and even twenty or twenty-five years—before it caused the abscess; very rarely the mischief has existed only for a few weeks or months."[2]

This being the case, it is interesting to notice that two cases of brain abscess following *acute* suppuration of the middle ear have been published during the last half-year.

The first, reported by Milligan[3], is a case of temporo-sphenoidal abscess secondary to acute left-sided suppurative middle-ear disease, treated by operation, but followed by acute hernia cerebri and death. The patient was a man aged forty-eight, who had enjoyed good health up to March, 1895, when he contracted a severe attack of influenza. He was laid up for a few weeks, after which he returned to his work—that of foreign

[1] *Text-book of Diseases of the Ear*, 1894.
[2] *Manual of Diseases of the Nervous System*, 2nd Edition, vol. ii. 1893, p. 474.
[3] *Arch. Otol.*, 1896, xxv. 265.

correspondent to a large commercial firm—and remained on duty until September of the same year. About this time his left ear became suddenly painful, and a profuse purulent discharge made its appearance. He was troubled with constant pulsating tinnitus, and with a marked degree of deafness. For three months he remained under the care of his ordinary medical attendant, during which time various forms of local treatment were tried. Pain in and around the ear and over the corresponding side of the head was so continuous and severe as to practically incapacitate him. When first seen by Dr. Milligan upon December 6, 1895, the following notes were made: "The patient complains of intense pain in the head, especially over the frontal region. This pain is aggravated by any movement of the head and especially by percussion. His mental condition is distinctly apathetic and his cerebration is slow and sluggish. He exhibits in a marked degree the condition of sensory aphasia or word-deafness, while, in addition, motor aphasia is present, although to a less marked degree. There is extreme ptosis, and the left pupil is dilated. The left optic disc is swollen and its edges are fluffy. There is left facial paralysis, but no apparent paresis of arm or leg . . . The temperature is 98.8° F., the pulse 66. During the preceding few days his wife says that there has been incontinence of urine and fæces. She also states that for a week he has had hardly any sleep on account of the severe pain in his head, which he constantly clutches between his hands and complains of." The skull was trephined over the temporo-sphenoidal lobe, and an abscess containing four drachms of perfectly odourless pus was evacuted. The abscess was drained, and all went well until the end of January, when a hernia cerebri formed, and the patient died of advancing basal meningitis.

The other was a case of acute otitis media, followed by an abscess in the temporo-sphenoidal lobe. Operation; death from shock. It is reported, with two photographs, by Dr. Gorham Bacon.[1] The patient was a young man of twenty-five years. Eight weeks before being seen he had a slight discharge from the left ear, but before this he never had any ear disease. One month ago he had been seen by a surgeon, who found on examination that the seat of the trouble was in the attic, which was congested and bulging. This was incised, and a few drops of pus were evacuated. Severe headache followed, with tenderness to pressure over the mastoid. For three weeks he has had loss of memory for objects and names of friends. Memory for events good. He has been extremely irritable when suffering from headache, and his friends have noticed that he has acted and talked "queerly." On examination there was very slight discharge in the left canal, but there is bulging of Shrapnell's membrane, with a small perforation. He is unable to name certain objects held before him, such as "scarf-pin," "cuff button," &c. No motor aphasia. Temperature 98.8°, pulse full

[1] *Arch. Otol.*, 1896, xxv. 249.

and slow 56, respirations 16. Heart shows long systolic murmur, A brain abscess was suspected, but the antrum was first opened and washed out. This seemed to give relief for the first week, but then pain in the head reappeared, and he had spells of hilarity, *i.e.* laughing and singing. Vomiting came on, and then delirium, followed by somnolence. The skull was then trephined over the temporo-sphenoidal lobe, and an abscess cavity found containing half an ounce of pus. This was evacuated, and the cavity packed with iodoform gauze. The patient died from shock two hours after operation.

W. H. HARSANT.

Reviews of Books.

Memorials of the Faculty of Physicians and Surgeons of Glasgow, 1599—1850. By ALEXANDER DUNCAN. Pp. xiii., 307. Glasgow: JAMES MACLEHOSE AND SONS. 1896.

Histories, even when accurate, are wont, unless written by a scholar, to be at the best dull reading; but Mr. Duncan, the Secretary and Librarian of the Faculty, has in the book before us compiled an interesting and eminently readable work on a subject of which he is evidently complete master.

It has been a source of great pleasure to us to read the *Memorials* of this, the oldest medical corporation in Scotland, and not only is the author to be congratulated on the completeness of his work, but the Faculty also on having so able an historian to tell them all about themselves in the past. The Faculty obtained its charter from James VI. on November 29th, 1599, at the instance of Dr. Peter Lowe—whose handsome portrait forms the frontispiece to the book—and Robert Hamilton; and, unlike the subsequent foundations of a similar character, had powers (which it used) over a considerable area of the surrounding district to examine, to license and prohibit practice, and to amerce a fine by "letters of horning." The granting of a charter of this nature to a profession in a town of only 7,000 inhabitants is certainly a very remarkable event, and it is only natural that the powers given the medical profession were not amicably received by the civic authorities of the town. As the author points out, it was probably due to Dr. Lowe and his foreign experiences that the barbers, then a branch of the surgical side of medicine, were given such an inferior position; for they were admitted as a "pendecle of Chirurgerie" only as a matter of grace, and were allowed "to midle not w^t anything farder belonging to Chirurgerie." Even lithotomists, or "stone cutters," were only admitted on sufferance, the Faculty viewing the operation as "too dangerous a procedure ... to rank with the ordinary practices of the life-preserving art." They

were therefore appointed by the magistrates and paid out of the rates; but occasionally, as in the case of Evir M'Neill, who cut for forty-two years (1646—1688) and whose signature was made by a notary, they were admitted on account of their skill and for services rendered.

All through the book there is evidence of the jealousy of the Faculty in regard to any interference with their rights, and of the persistence with which they fought for the privileges conferred on them in the charter.

We wish we had space to refer to the many more interesting facts we have come across in reading these *Memorials*, but must content ourselves with recommending the student of medical history to read the book for himself. Among the most distinguished alumni were Dr. Peter Lowe, Robert Houston, the father of ovariotomy, William Smellie, the obstetrician, William Cullen, John Moore, the father of Sir John of Corunna fame, and Dr. Joseph Black, the discoverer of carbonic acid gas.

We cannot conclude this notice without hearty praise to the publishers for the general appearance of the volume. The type and paper are most attractive.

Grundriss der pathologischen Anatomie. Von Prof. Dr. R. Langerhans. Zweite vermehrte und verbesserte Auflage. Pp. x., 566. Berlin: S. Karger. London: Williams and Norgate. 1896.

This is an enlarged and improved version of the first edition of the book. The author modestly disclaims originality for his work, which is not designed to replace the larger and more comprehensive treatises on Pathology, but to present to the student and learner in pathology the main facts of the science in as comprehensive a manner as is consistent with a treatment of the subject within a moderate compass. There is no doubt that the book is well written, and proceeds from one who has a thorough mastery of his subject and is therefore well qualified to teach it. It is essentially a pathological anatomy; although the physiological side is entered upon when necessary, this is a subsidiary feature of the work. On most of the subjects treated, a good description, short but containing the essential points, of the pathological changes is found. The author has throughout avoided controversial subjects and the statement of conflicting views. The enumeration of pathological conditions with only a brief explanation—a necessary procedure to keep a book on pathology within moderate limits—is apt to render some parts of the subject difficult, especially to beginners.

The arrangement of the book is novel, and not altogether to be recommended. The author has departed from the plan usually followed in works on pathology of a division into a general and a special part, and thus saves some repetition at

the cost of convenience of description. For example, under the head of Tuberculosis we find all the lesions associated with the presence of the bacillus in the various organs; and in the same chapter, on "diseases brought about through vegetable parasites, including the infectious diseases," the description of the changes in the lungs in pneumonia. Though this may be scientifically correct, it seems better to adopt the usual plan of treating the pulmonary lesions in tuberculosis and in pneumonia under diseases of the lungs and so on. As another example, the account of dysentery is given under diphtheria. Then the group of infective granulomata, well characterised by their anatomical changes, finds no place apart, these diseases being considered in the chapter above mentioned. The place of sarcomas in the chapter on histioid tumours also appears inappropriate. The chapter on diseases of the nervous system is hardly adequate to the subject, and suffers from the want of a few good diagrams. Inflammation and fever are also shortly dealt with. On the other hand, most sections of the book are very good.

The illustrations throughout are of moderate excellence. Taken as a whole the work presents a sound and scientific account of pathological anatomy, and the author has succeeded in giving a very large amount of information in a volume of moderate dimensions.

A Text-book upon the Pathogenic Bacteria for Students of Medicine and Physicians. By JOSEPH MCFARLAND, M.D. Pp. 359. Philadelphia: W. B. Saunders. 1896.

This work has for its main object the description of the pathogenic bacteria in such a readable, but at the same time accurate, manner as to be of service to students, practitioners, and others whose daily work or inclination affords a motive for acquiring information upon this subject. It labours, therefore, under the disadvantage of losing the wealth of illustration afforded by a study of the non-pathogenic forms, and is likely to create difficulties for the practical worker by failing to prepare him for the recognition of the very numerous associates of the specific organisms which will confront him at the outset of any serious investigation. On the other hand, the limitation to practically "only such bacteria as can be proven pathogenic" dispenses with a large amount of matter which is not of direct interest to the class of readers for whom the work is specially intended; and this object would perhaps have been more perfectly realised if the second part only had been published, for here the material and the illustrations have been judiciously selected from the best sources.

The introduction to the first part consists of an historical account of the evolution of the science, commencing at what many will consider an unnecessarily early date. The apparently reasonable view that the consideration of bacteria should begin

with their probable discoverer, Leeuwenhoek, is here stigmatised as folly; and the opportunity is taken to trace a somewhat forced connection with the very audacious speculations of the early Greek philosophers. The concise but clearly worded record of progress, with which this section closes, brings into great prominence the rapidity with which the specific organisms of the most important and widespread diseases were discovered when a start was once made.

The chapter on the composition and morphology of bacteria is not one of the happiest efforts. Nencki is credited with the discovery that "the chemical analysis of bacteria in the active state consists of 82.42 per cent. of water," and that mycoprotein "has the composition C 52.32, H 7.55, N 14.75." Whether this observer is in the habit of calculating his results on a basis of 74.62 parts, or cautiously leaves a margin of more than 25 per cent. for undiscovered elements, does not appear. But a still more striking instance of the danger of incorporating interesting pieces of information without due consideration occurs a page or two later. After being told that the weight of an average bacterium is $\frac{1}{10.000.000.000}$ milligramme (Nägeli), and that, doubling hourly, one germ will, under ideal circumstances, become in three days four thousand, seven hundred and seventy-two billions (Cohn), both of which statements are sufficiently near the truth, we learn that the "demnition total" would, according to a most eminent writer on the subject, "weigh no less than seventy-five hundred tons." At first sight it would seem that an explanation has at last been given of the exorbitant prices charged by scientific instrument makers for incubators. A broth culture measuring 10 c.c. often contains ten thousand million bacteria, weighing on this basis of calculation about thirty-five pounds. On a moderate computation the cotton wool plug will weigh as much, and the tube and culture medium a thousand (more probably twenty thousand) times as much as the bacteria. A pressure, therefore, of about fifteen tons will be brought to bear on the thin sheet metal of the incubator by each culture tube; and though it is true that in general the former is shielded by the bottom of a thin glass beaker supporting the tubes, it is not surprising that the effects of their enormous weight have to be counteracted by a subtle system of struts and stays at prodigious expense. On closer inspection, unfortunately, this explanation is found to be scarcely consistent with hard facts. If a bacterium weighs the one ten-thousand-millionth of a milligramme, the weight of ten thousand million will be one milligramme; of a billion, one decigramme; and the weight of four thousand, seven hundred and seventy-two billion bacteria will be 477.2 grammes, or slightly more than one pound. It is apparently impossible to deny the British origin of this poetic flight; but it seems a thousand pities that the story of the prolific germ did not find a more appropriate birth-place in the land of tall tales. A sentence on page 35 seems to imply that the development of a spore depends upon

its being "accidentally" dropped into some nutrient medium; and page 40 contains a definition of animal and vegetable life considerably more simple than satisfactory.

The chapter on the physiological activities of bacteria is more satisfactory, though somewhat confused. A paragraph dealing with the reduction of nitrites (? nitrates) in particular completely misrepresents the result of Winogradsky's researches on the production of nitrates and nitrites.

The vexed question of immunity is on the whole well handled in so small a compass.

The methods of examination and culture of micro-organisms are clearly described, though in several details the practice recommended differs from that in force on this side the Atlantic, and is occasionally incorrect. Boiling gelatine media over a naked flame invariably impairs their setting powers; this is indeed proved by the direction to filter a litre of gelatine through a cold filter—quite an impossibility in this climate, with a nutrient gelatine which would subsequently stand an incubating temperature of 22° C. The practice of steeping the meat for some hours in water in the preparation of bouillon is almost universally discarded in favour of boiling up directly, by which means also the subsequent filtration is much expedited.

It is the second part of this work that will appeal most strongly to the readers to whom it is particularly addressed; and it is gratifying, therefore, to find a distinct improvement on the earlier chapters. The descriptions of the bacteria connected with the various specific diseases are concisely and clearly written; and a sufficiently detailed account is given of matters of interest, such as the preparation of anti-toxic serum, to enable students to intelligently follow modern developments. It is satisfactory to find unqualified approval of Löffler's medium for the cultivation of the bacillus diphtheriæ, and a note of the difficulty of growing this organism on agar or glycerin agar except by a process of education which renders these media totally unsuitable for diagnostic purposes. In connection with the first stage of the preparation of diphtheria antitoxin, it is stated that the author has successfully introduced the dose of toxin into the trachea, instead of, as usual, into the subcutaneous tissue of the animal. As the dose may amount to 300 c.c. this would seem a bold expedient. Under this section, as well as those dealing with tetanus and anthrax, credit is properly given to Brieger, Roux, Behring, and others, for their work on the toxins; but no mention is made of the very important researches of Sidney Martin on the products elaborated by these organisms.

The illustrations in this part are mostly excellent reproductions from the atlas of Fränkel and Pfeiffer. One obvious drawback to this system of collecting illustrations is that photographs are not invariably made to the same scale. Of this there is a striking example in the representations of the typhoid bacillus and bacillus coli, which are obviously intended

to be compared, but which leave a very erroneous impression as to their relative size, owing to the different degrees of magnification.

Aseptic Surgery. By CHARLES BARRETT LOCKWOOD. Pp. xiv., 233. Edinburgh: YOUNG J. PENTLAND. 1896.

This work is a compilation of "notes" which were published in the *St. Bartholomew's Hospital Journal*, and although, as the author truly and modestly says in the introduction, they have "no pretensions to completeness," they may be read with profit by students and medical men as an introduction to the science of which they treat. The work is divided into four parts: (1) The principles upon which aseptic surgery is founded; (2) the distribution of bacteria; (3) disinfectants and antiseptics; and (4) their method of application to surgical practice. The author states clearly and forcibly those views in which he believes, and by the application of which he has worked so well. There is, however, a somewhat unnecessary repetition through the book—*e.g.* the footnote on p. 167 is incorporated in the text on p. 164. The printing is clear and apparently free from errors, the binding is neat, and there is a most complete index. We can recommend the book as a sound and practical elementary treatise.

An American Text-Book of Obstetrics. RICHARD C. NORRIS, M.D., Editor. ROBERT L. DICKINSON, M.D., Art Editor. Two volumes. Pp. 1—492, 493—1009. London: THE REBMAN PUBLISHING COMPANY, LIMITED. 1896.

This truly magnificent work is introduced to us by the simple statement in its preface, that "Although our standard text-books of obstetrics have occasionally been *revised*, an entirely new text-book containing the writings of more than one individual has not appeared during the last decade." The two volumes before us are the joint work of fifteen eminent American obstetric physicians, who, with scarcely an exception, are men of ripe experience, and who have, moreover, the power of imparting the fruits of their experience to others.

Before we proceed to review in detail the different portions of this work, it is but just and right to make some preliminary remarks upon its general "getting up." This reflects the greatest credit upon the publishers. Evidently no expense has been spared, and the work has been done in the very best manner, equally as regards quality of paper, clearness of type, and the high artistic merit of the numerous engravings, some of which are beautifully coloured. As regards illustrations, there is indeed quite an *embarras de richesse*. Many of these are original, being drawn from nature or from photographs, whilst many

others are delicate line engravings, copied on a small scale from the bold, life-sized designs of many of the old masters.

The arrangement of the different parts of this important "text-book" is exceedingly good and judicious. The first part begins with a very clear and complete description of the anatomy and physiology of the female generative organs. This part is profusely illustrated; but there is one picture in particular which forms the frontispiece of the work and is beautifully coloured. It represents a mesial section of the pelvis and its contained organs, and is admirably adapted to give a student a correct idea of the relations of these parts to one another. This section has been very properly confided to Dr. Piersol, Professor of Anatomy in the University of Pennsylvania. It contains a most complete description of every detail connected with the anatomy of the pelvic bones and the contained soft parts, and occupies no less than fifty-seven pages, nearly every one of which is beautifully illustrated. The same remark also applies to the physiology of pregnancy: in this he has received the valuable help of Dr. Palmer, Obstetrician and Gynæcologist to the Cincinnati Hospital, to whose experience and skill we owe the very judicious remarks on the changes induced in the maternal organism during pregnancy. Their section, however, on the diagnosis of pregnancy, treats of this subject rather too shortly, when we consider its immense importance, in actual practice, both to the young obstetric practitioner and to his patient. It is sometimes difficult to say which may be most damaged by a wrong diagnosis, the reputation of a young doctor or the mental and bodily condition of his patient. Yet in so complete and so elaborate a work as Norris's *Text-Book of Obstetrics* we find that only twenty pages both of letterpress and illustrations are devoted to this important subject. The deficiency here is most serious in the matter of illustrations. The same holds good with most of the symptoms and signs of pregnancy, but with two striking exceptions: in one, our knowledge of the changes produced by pregnancy in the breasts is derived almost entirely from the sense of sight; in the other (perhaps the most important of all the signs of pregnancy), viz. auscultation, from the sense of hearing. It is therefore obvious that exact drawings from nature of the size and colour of the areola are all-important for teaching purposes; but that as regards auscultation, illustrations of any kind are all but useless. The only way to learn it is by practice at the bedside. In Montgomery's classical work on the signs of pregnancy his singularly full and correct description of the changes in the breast is accompanied by no less than eight beautiful full-page drawings representing the nipple and areola in each progressive change which takes place in every month from the third to the ninth inclusive. From Montgomery's full and lucid description, illustrated by these beautiful plates, a student may easily learn all that is necessary for him to know on this subject. But in

the "text-book" before us, instead of eight drawings, each in a separate page, they are all squeezed into one page; and to do this comfortably they are reduced to two-thirds of the natural size, and, greatest defect of all, they are not even coloured, although very well engraved. A plate of this kind deprives the student of more than half the information he might otherwise obtain from it. In each page of a volume the size of this one it would be easy to insert two drawings of life-size and -colour. In a book so abounding in excellent work, like the one before us, we are sorry to have to point out so serious a deficiency; but we trust, by so doing, to lead to some alteration in a second edition.

The hygiene and management of pregnancy are also dealt with by Dr. Palmer, who, in a small space, gives much good advice as to clothing, diet, air and exercise in pregnancy. He recommends occasional examination of the urine, about once a month, because "albuminuria is present in at least from 5 to 10 per cent. of the cases of pregnant women;" and when this is so, there is danger of eclampsia. Sexual intercourse he discourages, especially during the earlier and later months.

The section on the pathology of pregnancy is a very long one, comprising 133 pages. No less than five authors have contributed to this, which, if we may judge from the reputation of each, illustrates the old proverb that "in the multitude of counsellors there is wisdom." For instance, Dr. Davis, of Philadelphia, writes a long and very complete description of various disorders, both general and local, during pregnancy, and their appropriate treatment, and also of acute infections, and accidents and surgical operations during this period; Dr. Etheridge, of Chicago, on diseases of the ovum and abortion, and the relations of one to the other; Dr. Kelly, of Baltimore, on that dangerous *lusus naturæ*, extra-uterine pregnancy; and lastly, Dr. Earle, of Chicago, whose article, on account of his death, was finished by Dr. Mergler, on that very interesting but very little known or understood subject, diseases of the fœtus *in utero*.

After a thorough description of pregnancy in all its bearings, we come, in the ordinary course of events, to the consideration of natural labour. This includes, in about twenty pages, a good description of the symptoms accompanying the first, second, and third stages of labour, by Dr. Dickinson, Obstetrician to Long Island College Hospital, New York, and is illustrated by some diagrams showing sections of the os uteri and pelvic floor during the process of dilatation and expulsion. These are very well done, and very useful in a practical point of view to students. The conduct of normal labour is described in a very clear and practical manner by Dr. Jewett, who is also Obstetrician to Long Island College Hospital. Like most American doctors, he attaches the greatest importance to antisepsis in labour, and gives minute and particular directions

for enforcing it that might be found tedious to a practitioner who is suddenly called to a rapid case. Anæsthesia, for which he prefers chloroform, he uses but sparingly and prudently. He also describes the management of the three stages of labour, especially how to manage abdominal palpation, and examinations, external and internal. There are no less than nine plates, evidently from photographs, to show the mode of palpation. The utility of such plates is perhaps doubtful, for the knowledge of these manual operations has to be learned rather by the *tactus eruditus* at the bedside than by the sense of vision.

It is a gratifying proof of the confidence of his colleagues in Dr. Reynolds, of Boston and Harvard University, that so important a subject as the mechanism of labour should have been entrusted solely to him, and their confidence in him has not been misplaced. The mechanism of ordinary vertex presentations is very fully described and illustrated by a great number of most useful diagrams. The more untoward presentations of the head are also fully gone into, and the management of each variety is carefully described. Less attention, however, has been paid to presentations of the breech, inferior and superior extremities or cross births, and what are called compound presentations or prolapsed extremities. In cases of arrested breech we have found the fillet safer as regards the child, and more effectual than any other instrument. The worst kind of instrument is the forceps. If applied as in Figs. 277 and 278, it would either slip off or make injurious pressure on the child's viscera. We have quite given up applying forceps to the breech.

We have next to notice the second volume. It has much more to do with pathology than the first, and consequently with obstetric operations of every kind. It is exceedingly practical and excellent in every way, and is undoubtedly the more important of the two volumes. It begins with dystocia, and it is, perhaps, the best illustrated section of the book. The greater portion of this is written by Dr. Hirst, Professor of Obstetrics, University of Pennsylvania, to whom has been entrusted the subject of "Anomalies in the Forces of Labor." There are a large number of beautiful plates to show every kind of deformity which may cause pelvic contraction; and lastly, a chapter on dystocia caused by disease or monstrous growth of the fœtus, with quite a picture-gallery of teratology, showing specimens of every kind of single or double monstrosity of the most uncouth and repulsive description, Dr. Parvin, of Jefferson Medical College, Philadelphia, writes on accidents to the cord. In prolapsed cord he recommends reposition; but if that fails, podalic version to save the life of the child, if not already lost from pressure. Dystocia due to hemorrhage is the joint work of Dr. Parvin and Dr. Schwarz of St. Louis. It includes the three kinds mentioned by Rigby, viz., accidental, unavoidable, and

post-partum. Of these, the second, viz., unavoidable hemorrhage arising from placenta prævia, is usually considered the most dangerous. Of this the authors give a very full and judicious account. Accidental hemorrhage, however, which according to our experience is quite as dangerous, does not, we think, receive quite sufficient attention. The same remark does not apply to the treatment of *post-partum* hemorrhage, almost every well-known and well-established mode of treating this being mentioned. Nor does it apply to dystocia due to accidents, such as rupture of the uterus and inversion, and diseases of the mother, especially eclampsia, about which Dr. Parvin writes a long and very good account. In treating these cases, he justly recognises the value of occasional bleeding, as our fathers did, but thinks they were "wrong in making venesection the common remedy in eclampsia, but their sons are equally wrong in entirely rejecting it." He also thinks highly of hypodermic injections of tincture of veratrum viride, from ten to twenty minims; and treats of dystocia arising from a variety of other diseases.

The next section deals with the puerperium. The parts treating of physiology, its diagnosis, and management are written by Dr. Jewett. He gives a good and clear description of the process of involution of the uterus, by which that organ very nearly regains its former bulk, and this is well illustrated by four diagrams. The largest and most important part of this section is that which embraces the pathology of the puerperium. For the greater part of this, which is all very well done, Dr. Norris, the Lecturer on Clinical and Operative Obstetrics, University of Pennsylvania, is responsible. In the first portion, which treats of the injuries of the genital organs following labour, Dr. Schwarz is associated with him, and Dr. Norris writes on hæmatoma only. Dr. Garrigues, Professor of Obstetrics in the New York Post-Graduate School and Hospital, follows next with a long and learned dissertation on puerperal infection, including a valuable essay on antiseptic precautions, proving by figures the truth of the old adage that "Prevention is better than cure." Subinvolution is the origin of a series of diseased conditions to which Dr. Norris with much ability traces them, and describes and treats accordingly. He states that "subinvolution is the starting-point of numerous intrapelvic disorders," and that "usually in from six to ten weeks the physiological changes known as *involution* have been completed." Delay in this process, he says, is generally due to the retention of decomposed clots or other *débris*, and should be treated accordingly. To this cause he attributes secondary hemorrhages, uterine displacements, &c. He then contributes a series of very useful articles on anomalies of the nipples and breasts, diseases of the breasts, and anomalies of the milk-secretion. These are followed by diseases of the non-sexual organs which are due to other causes than puerperal infection; and lastly, by a short but very

well-written and impressive article on rapid or sudden death in the puerperium, which is alike remarkable for the beauty of its style, its brevity, and the amount of information which it contains.

We are indebted for the next section to Dr. Etheridge and Dr. Earle, who treat of a little subject which is generally too much neglected in obstetric works, viz., the new-born infant. But yet it is one of great importance. In nine cases out of ten we find, in England, that the accoucheur who attends the mother is the one whom she consults if anything goes wrong with the baby. It begins with a short but very good and complete treatise, by Dr. Etheridge, on the physiology of the new-born infant, and contains some very interesting facts with regard to the gradual development of its perceptive faculties. He also makes some useful remarks on the management of premature infants, and the importance of maintaining their proper temperature by an apparatus like Auvard's incubator. Dr. Earle is responsible, however, for the greater and more important part of this section. He enters very fully into an account of both the major and minor ailments of infants and their treatment, and has done this duty most satisfactorily.

Dr. J. C. Cameron, of Montreal, writes on instrumental operations, with the exception of symphysiotomy, for which Dr. Jewett is responsible. Dr. Dickinson gives a good account of operations requiring the hands only, such as external, bipolar, and internal version. Dr. Hirst who deals with "Celiotomy for Sepsis in the Child-bearing Period," provides us with an admirable essay on a subject which requires great care in its management. All three parts of the section on obstetric surgery are very rich in illustrations, altogether as well executed as those which pervade both volumes.

An excellent index of thirty-three pages concludes this highly meritorious work, which is a *chef d'œuvre* of which the fifteen authors may be justly proud.

Surgical Diseases of the Ovaries and Fallopian Tubes, including Tubal Pregnancy. By J. BLAND SUTTON. New and enlarged Edition. Pp. xv., 428. London: Cassell and Company, Limited. 1896.

When reviewing the first edition of this book in 1893, we pointed out the great value of an intimate knowledge of pathology to the surgeon, and directed attention to the very elaborate and valuable pathological information it contained. Mr. Sutton is always collecting and examining specimens, and each edition will throw more light on the nature of diseases of the ovaries and tubes. The originality of the work which was so evident in the first edition is as marked a feature of the additions in this later one. Mr. Sutton tells us that his object in writing it has been "to enable deduction from observation to replace

hypothesis and speculation," and certainly deductions from observations of the most valuable kind are abundant. Like so many other standard works, it originated in an essay which obtained the Jacksonian prize.

We notice in this new edition a development of clinical gynæcology, such as we might expect from Mr. Sutton's new appointment as Surgeon to the Chelsea Hospital for Women. The much debated question as to the effects of the removal of the ovaries on the secondary sexual characters of women is discussed on a basis of careful and extended observation, and the, possibly, more important subject of the effect of removal of the ovaries and tubes on menstruation is fully considered. The new method of treating osteomalacia by removal of the ovaries is referred to and the connection between this disease and uterine function discussed.

Not only are all forms of ovarian tumours very fully and clearly described, with the aid of a splendid series of illustrations, but the practical details of ovariotomy are given in a way which will greatly assist those who are not very experienced in the operation. Mr. Sutton's suggestion to use what he calls "the tell-tale" sponge seems to us distinctly valuable. The sponge on a holder is pushed down into the pelvis and allowed to remain there while the sutures are put in, and on withdrawal before tying the sutures, it informs us if any bleeding is going on.

The subject of tubal gestation is very fully treated, both from its pathological and clinical aspects. Mr. Sutton has collected all the English cases in which tubal pregnancy has been diagnosed before primary rupture, and removed. There are ten such. The first case was diagnosed by Herman in 1890. The author's other tables of cases of extra-uterine gestation at later periods are very valuable, but they would certainly have been much more so had he not confined himself to the records of British surgeons. The difficulties and dangers of dealing with the placenta in operations during the later months of extra-uterine pregnancy are graphically described.

The appearance of this new edition of Mr. Bland Sutton's book should be an incentive to every surgeon to re-read such a valuable and instructive work.

Researches into the Anatomy and Pathology of the Eye. By E. Treacher Collins. Pp. xiv., 140. London: H. K Lewis. 1896.

This book is an extension of the lectures given before the Royal College of Surgeons by the author in 1894, and the outcome of six years' work as Curator of the Museum of the Royal London Ophthalmic Hospital.

The pathological researches of Mr. Collins of recent years are not second either in importance or number to those of any

other observer, and the book before us does honour to English ophthalmology. It contains the results of an enormous amount of original investigation, and no space is wasted by repetition of knowledge which for some time has been well recognised and fully worked out. The book is well arranged, very clearly written, and has good illustrations. No ophthalmic surgeon should be without it; where points of difficulty are not cleared up, there is always suggestive reasoning for other investigators to elaborate.

The various anomalies of development and diseased conditions of the lens are followed by those which affect all the other tissues of the eyeball. Abnormalities of the iris, and unusual forms of glaucoma, the effects of aneurysm, and of wounds, all are fully considered and largely illustrated. Every page of the book bears evidence of the author's ability and experience, and great credit is due to the publisher for the way the book has been issued.

Color-Vision and Color-Blindness. By J. Ellis Jennings, M.D. Pp. ix., 115. Philadelphia: The F. A. Davis Company. 1896.

This book begins with an extremely good historical sketch. Soon after Prof. Holmgren had perfected his method of examination by coloured wools, he found that out of 266 employés on the road of the Upsala-Gefle line—about whose vision no suspicion had existed—13 were colour-blind.

Special public attention was called to the subject in 1875 by an enquiry into the causes of a railway accident which had taken place in Sweden, from which it appears that colour-blindness was the cause of the disaster.

Our author having described colour-sensations, goes on to discuss the theories of colour-perception and colour-blindness, classifying the latter defect as total and partial. Total colour-blind persons seem to see the world somewhat as though it were an engraving in black and white; but these cases are extremely rare. It is said that ordinary colour-blind people make excellent engravers from pictures, of which they get but an imperfect conception of the colouring. The dangers to the community of colour-blind employés, particularly on railroads and ships, are considered, and it is explained how impracticable it would be to make any change in the present system of signalling in order to accommodate the colour-blind. The various methods, old and recent, for the detection of colour-blindness are described, with their practical application to candidates for examination by the colour-sense. There is a good chapter on acquired colour-blindness. The book is well printed and is very readable.

Epidemic Ophthalmia, with Papers upon Allied Subjects. By SYDNEY STEPHENSON, M.B. Pp. viii., 278. Edinburgh: Young J. Pentland. 1895.

The symptoms, diagnosis, and management of epidemic ophthalmia, as it invades schools, workhouses, barracks, &c., are here discussed with great detail. Dr. Stephenson deals with: (1) the various affections grouped under this name and how to distinguish between them; (2) the ways in which those affections are spread; and (3) the measures that have been found most successful in dealing with these several conditions. The author's knowledge of this subject is based upon his large experience at the Ophthalmic School, Hanwell, and his well-known interest in it has for some time given prominence to his views, whether written or in debate. The book is equally valuable to ophthalmic specialists, to school doctors, or to those concerned in the management of institutions in which large numbers of individuals are housed together, particularly under conditions of overcrowding or imperfect sanitation.

Eyesight and School Life. By SIMEON SNELL. Pp. viii., 70. Bristol: John Wright & Co. 1895.

The author of this book well says that "day by day it becomes more evident that good vision in all walks of life is no luxury, but a necessity, and many of the avenues to employment are being closed to those who possess impaired eyesight." It is obviously of the greatest importance that every care should be taken during the period of development and of education, that delicate eyes should not be overworked, and that the requirements of study should be under conditions which are made as little deleterious as possible to health. Overworked eyes were at one time rested: now-a-days absence from school is not easily conceded; and all available artificial aid is invoked, that the student may continue his daily toil.

The little book before us is written by an ophthalmic surgeon who has paid special attention to the practical side of eye work under various conditions of occupation and of environment; and it may be recommended to the perusal of parents or of those who undertake to relieve them of the responsibility of guiding the progress of their children. There are many good illustrations of practical value; and the subject matter is expressed in simple language which requires no scientific knowledge in order that it may be appreciated and understood. We commend the book to all interested in the welfare of the young.

A Manual of Syphilis and the Venereal Diseases. By JAMES NEVINS HYDE, M.D., and FRANK H. MONTGOMERY, M.D. Pp. 1—8, 17—618. Philadelphia: W. B. Saunders. 1895.

In this book the authors lay before their readers in a clear and concise form our present knowledge of the study and treatment of syphilis and the venereal diseases. Great care has been taken throughout to exclude from the text all controversial points and theories. We would call special attention to the sections on "Syphilis in Relation with the Family and Society" and "Hypochondriasis," as containing many valuable hints for the guidance of the young practitioner. The question of the insurability of the lives of those affected with syphilis is well considered. The practice of irrigation in acute urethritis, so much vaunted by some American authors, is not recommended.

The book is printed in clear type, the illustrations are on the whole good, and include an excellent coloured plate of Ducrey's bacillus. We are convinced that the work will be appreciated by the student and busy practitioner.

The Histopathology of the Diseases of the Skin. By Dr. P. G. UNNA. Translated by NORMAN WALKER, M.D. Pp. xxviii., 1205. Edinburgh: William F. Clay. 1896.

After considering Anomalies of Circulation in 66 pages, nearly 600 pages of this work are taken up by inflammatory affections. Then 452 pages are given to Disturbances of Nutrition, Progressive and Regressive; 69 pages to Malformations, and 7 pages to Saprophytes and Foreign Bodies; then there is a full index, very useful, but not too complete—*e.g.* the word favus nowhere occurs. The author's preface gives us the key to the work he has accomplished. He states that, practically, since the publication of Gustav Simon's *Text-Book on Histopathology of the Skin*, in 1840, no important work on the subject has been published. The author determined to work on the same ground—viz., the whole of cutaneous pathology—and although five years of close, exact, and continuous labour (and we know what work means in Dr. Unna's laboratory) have been given to it, the author acknowledges how incomplete much of it is. Then as to "method" of work. Nuclear stains almost solely characterised the older modes, with the result that many skin affections appeared microscopically identical; but the author, by extending the process of staining to the interstitial tissues, has brought out very marked microscopical distinctions. The two pages of coloured plates near the beginning of the work illustrate these processes in several respects.

At the head of many of the divisions we have a very useful and concise clinical history of the disease under discussion, and although there are many attempts at simplification of nomenclature, this has caused the introduction of many new terms. We fear the time of simple names is yet far distant in skin affections. We owe very much to the translator; but of this we will speak at the end of our review.

We have great difficulty in summarising, because the work is very extensive and the processes of examination, in many instances, are new to us. No one is justified in criticising them until he has gone carefully and patiently through them. For example, concerning œdema of the skin it is said: "Every œdema of the lymph spaces separates the elastic fibres. Wherever we observe an elastic fibre stretched across an opening in the tissue in a different direction to the neighbouring fibres, that space was present in life, for the elastic fibres cut through in section separate from each other, when the section is pressed, in a direction always parallel to the collagenous bundles" (p. 23). Again: "The hæmorrhages of the skin are distinguished clinically as such from hyperæmia on one hand, and angioma on the other, by this fact, that their red colour does not disappear under the pressure of the diascope" (p. 44). Then the coloured plates in the beginning of the work, the results of various staining agents, illustrate our position very well.

Even when Dr. Unna theorises he gives strong grounds for his views. Speaking of the bleeding in purpura, the theory that there are poisonous foreign bodies, in particular certain bacteria, whose entry into the circulation of the skin, in some unexplained manner, and without the intervention of wide-spread thrombi, induces hemorrhage, seems reasonable, because in other affections, as erysipelas, phlegmon, and elephantiasis nostras, there are much wider-spread thromboses and yet no tendency to hemorrhage. Then we must give the author credit for conscientiousness. Thus, after describing very minutely the changes which are induced in herpes zoster on the skin-layers, and which are, in fact, well displayed in coloured plate 11, and contrasted with the ballooning of the surface in varicella as shown in plates 10 and 12, he adds: "My preparations allow of no conclusions as to changes in the nerves. To this point future investigation, with appropriate methods, must be particularly directed." (p. 154.)

Amongst the infectious inflammations, seborrhœic eczema in its many forms is, as we should have expected, dealt with with much detail and great precision. Ecthyma is regarded as a distinct disease from impetigo contagiosa; our own experience, and that of most English authors, do not corroborate this view. With regard to lichen, Dr. Unna prefers the simple term lichen planus, dropping out the adjective "ruber," which has been the cause, if not of bloodshed, yet of much confusion and strife since Hebra, sen., first employed the term. Lichen

scrofulosorum (not scrophulosorum, as it is spelt p. 303, for the term has no Greek origin) is taken out of the lichen group, and is termed "Folliculitis scrophulosorum." Acne is well described, but the arrangement excludes A. varioliformis, which becomes "Folliculitis varioliformis," being differentiated from acne because the bacillus peculiar to it does not exhibit any comedo. Tricophytosis and favus come under inflammatory infectious diseases. This is certainly not illogical, but it shows the increasing importance of parasites in inflammation. We feel that we should have preferred, nevertheless, to have still found them classified under the heading of "Parasitic diseases." No confusion of frambœsia (yaws) with syphilis is entertained, and we quite agree with this view. There may be analogy in several respects, but the history is very different, and those medical men who have had most to do with yaws endorse the distinction. The subject of syphilis receives very scientific consideration. We are quite in accord with the author in making no very distinct line between secondary and so-called tertiary symptoms. He says (p. 554): "The tertiary syphilides form a sort of general group, embracing everything which can be regarded as the result of the syphilitic invasion. But nowhere is it easier to demonstrate . . . that they are only the rejuvenated remains of old syphilitic products, of the secondary, or even primary period." From pp. 624—663 we have some very interesting remarks and observations on the acute exanthemata, but, strange to say, not a word about "German measles" or "rötheln"!

In Section III., "Progressive Disturbances of Nutrition," the remarks on malignant growths form a very interesting chapter. "Paget's carcinoma of the nipple" is very fully considered, and good evidence adduced that "swelling of the lymph glands only accompanies the last stage of the general cancerous cachexia." In the succeeding chapter, "Benignant Growths," we have the name proposed by Virchow and Neisser, viz., "Epithelioma contagiosum," for "molluscum contagiosum," adopted, because "the striking elastic hardness of the nodules makes the name molluscum . . . quite inapplicable"; but we do not quite agree with this explanation, for the reason that our Latin dictionary defines the word "a kind of a soft nut, with a thin shell," which describes the state of things very fairly, and "epithelioma" has come to be associated with a more grave disorder. We also traverse the statement that Urticaria pigmentosa about the time of puberty almost always spontaneously disappears, because one of the most marked of several cases we have seen, of which we have a most excellent photograph, showed very distinct traces, although, perhaps, somewhat fading ones, at the age of 22, many years after menstruation had been set up. Unna regards the œdema of this complaint as being limited to the papillary body, and not affecting the whole skin, as in urticaria proper.

Myxœdema, which is classed under "Regressive Disturbances of Nutrition," is described as "œdema-like to the eye and not to the finger," and it shows "a wide-spread degeneration of the connective tissue framework, which alone suffices to explain the sodden, cushion-like appearances." Ulceration is said to be "granulation tissue hindered in its typical involution," a most acute observation. Alopecia areata is rightly regarded by Dr. Unna as contagious, but its micro-organism has not yet been discovered—the right staining material has not yet been found out.

Space forbids us to add more. Any review can only do scant justice to the merits of the work, but we must not overlook the translator's part. We owe a debt of deep gratitude to Dr. Norman Walker, which we cannot express better than by quoting from the author's preface to the English edition: "The attempt to make the book live again in another language is a . . . difficult task . . . But so far as I understand English, the translation has been most successful, and indeed in many places its conciseness has a certain advantage over the original." We thoroughly confirm this opinion. The text has been most ably and conscientiously rendered. That there are a few errors and a few involved, if not ambiguous, sentences, goes without saying, but these are but molehills in a mountain of intelligence—snowflakes on a summer landscape, which the warmth of a second edition will entirely dissipate. No medical library can be complete without a copy of this work; and every dermatologist and consulting physician should have the book on his shelves.

A Handbook on Leprosy. By S. P. Impey, M.D. Pp. xv., 116. London: J. & A. Churchill. 1896.

We have examined this work with great interest, because it is not long since we reviewed a work by Drs. Hansen and Looft, relating to leprosy as seen in Norway and Sweden. Dr. Impey, who was lately the Medical Superintendent of the Robben Island Leper and Lunatic Asylums, Cape Colony, deals with the incidence of the disease in South African States, where the conditions of climate are so very different, yet we note that the general results of leprosy are very similar in both these parts of the world. This condition of things corroborates a statement made by Dr. Impey (p. 27), that "no external influences, climatic, telluric, or meteorological, have any appreciable effect on the spread of leprosy."

The authors of both works agree that, practically, leprosy exists in two forms—the tubercular and the anæsthetic, and that there are mixed cases. Dr. Impey, in addition, describes a form, "syphilitic leprosy": five very characteristic plates are

given in illustration, and we find that two such dreadfully disfiguring diseases do not neutralise each other; nay, rather they intensify each other's attack upon the system by combining in a terrible partnership. Altogether Dr. Impey gives us thirty-seven splendidly-executed plates, illustrating the disease in its various stages and forms, and adds a map of Cape Colony, showing the geographical distribution of the disease.

This work is a valuable contribution to science. It shows that leprosy knows no distinction of sex, although more cases occur amongst males; but they are more exposed to predisposing conditions. Then we have strong evidence that it is not infectious, and that hereditariness counts for very little. Thus in Robben Island there were 266 leper-parents, who had had 951 children, of whom only 23, or about 2.43 per cent., became leprous. Of 520 lepers in the Asylum, 475 were born of healthy parents; and of the remaining 45 cases, in 25 the father was alone affected, in 16 the mother, and both parents in 4 only. Leprosy may attack all ages—from 3 to 80 years—the average being about 29. About 2,000 cases were estimated to exist in the South African States. Chapters XIX. and XX. deal with isolation, according to the present system, and suggest some desirable modifications. The regulations framed by Government for private isolation are given in the last chapter.

The Climates and Baths of Great Britain. Vol. I. Pp. xvi., 640. London: Macmillan and Co. 1895.

This work, being the report of a Committee of the Royal Medical and Chirurgical Society of London, comes to us with authority. The Committee was appointed in 1889, and is now carrying on its investigations under the Chairmanship of Dr. W. M. Ord, with Dr. A. E. Garrod as Honorary Secretary. The volume deals with the climatology of the south coast of England and the balneology of the more important spas of Great Britain. Much information was obtained from medical men practising in the various localities, and much also by the personal investigation of various members of the Committee. As each county is made the subject of an independent essay of some twenty to fifty pages in length, which contains full details of temperature, moisture, sunshine, mortality, &c., there must of necessity be much useless repetition, and the book, as one to read, is more tiresome than the dictionary of "the late lamented Johnson"; but as a book for consultation on the details in the climatology of any particular district it will satisfy the cravings of the most exacting enquirer, and will give him even more information than he can accept without a degree of reservation. When we read that "acute renal dropsy is reported to be practi-

cally unknown in Bournemouth," we cannot avoid the inference that such cases may have been classified under the heading of Influenza or some similar convenient appellation. The differences in the climatology of adjoining counties must be so small that it seems to have been necessary to magnify them in a work like this.

In the chapters on the Medicinal Springs of Great Britain we find no mention of the Hotwells of Clifton, nor is Clifton mentioned as a place which has a climate of any kind; but there is time to remedy this omission in the next volume. The neighbouring city of Bath "claims our first attention by reason of its antique renown, and by reason of the high temperature and abundant flow of its springs . . . For the complete and thorough application of a hot water, with no pronounced chemical constituents, Bath has at the present time an armament which, so far as our experience goes, is not excelled, if, indeed, it be equalled, by what exists in any similar resort in Great Britain or elsewhere." It is added: "No one can doubt that gout, anæmia, neuralgia, and many diseases of the skin can here find powerful methods of relief." Dr. W. M. Ord and Dr. A. E. Garrod have given us a very complete and interesting account of Bath and its thermal waters, with a judicial summary of their therapeutic uses.

The History of Surgical Anæsthesia. By H. BELLAMY GARDNER. Pp. 31. London: Baillière, Tindall & Cox. [1896]. —This is a paper read before the Medical Society of Charing Cross Hospital, and is opportunely published at the present time. It is interesting historically, and shows much research on the author's part.

Prostitution in Antiquity: in its Connection with Venereal Diseases. By DR. EDMOND DUPOUY. Translated by THOS. C. MINOR, M.D. Pp. 93. Reprinted from *The Cincinnati Lancet-Clinic*. 1895.—This "Study in Social Hygiene, written for medical brothers, physicians habituated, like the author, to seeing the different pictures of human pathological anatomy, physically and morally," gives a graphic description of the worship of Venus and Phallus by the men and women of Corinth; of the sanguinary satyrs who were formerly known as emperors, senators, and nobles of Rome; of the worship of Priapus, Isis, and Osiris in Egypt; of the cult of Lingam in India; of the worship of Baal amongst the Hebrews; and of the wide distribution of urethral and venereal diseases throughout all times.

Diets for Infants and Children in Health and in Disease. By LOUIS STARR, M.D. Philadelphia: W. B. Saunders. 1896.— This is a very useful pocket-book with detachable leaves, on which are printed forms to be filled up with the appropriate diets for children of all ages.

The Eye in its Relation to Health. By CHALMER PRENTICE, M.D. Pp. 214. Bristol: John Wright & Co. 1895.—It is not easy to see for what purpose this book was written. "Eye-strain" is a factor of some physiological import; but its importance has been so ridiculously exaggerated by the author that the book is likely to do more harm than good in the cause it is intended to support. Every conceivable disease is set down as depending on eye-strain: diabetes, consumption, ovaritis, insanity, etc., etc. The author's opinion is that "so-called cures for dipsomania perform whatever good they effect by temporarily relieving eye-strain." The book might amuse or seem very clever to a lay reader; but to a scientific mind its pretensions are absurd. It is true that it lies on a substratum of truth, based upon the work of George Stevens on the anomalies of the ocular muscles.

The Medical Inspection of, and Physical Education in, Schools. By CHARLES ROBERTS. Pp. 24. London: John Bale & Sons. [1896.]—This is a reprint of the paper prepared by the author for the Royal Commission on Secondary Education, and issued in the Blue-book containing the fifth volume of their Report. The points dealt with are well worthy the careful attention of medical officers of schools, of schoolmasters and schoolmistresses, amongst whom in its present accessible form it should find a large circulation.

King's College Hospital Reports. Volume II. London: Adlard and Son. 1896.—This volume should well maintain the interest of old King's College students in the work still done in their former school; it contains original articles and summaries of what has been passing in the various departments of the Hospital during the past year. There are reports with statistical tables bearing upon every special branch of our work, each of them well worthy of perusal, as are the "Notes on Cases of Interest" reported by various members of the staff. The original papers are excellent.

London Temperance Hospital: Report upon the Surgical and Ophthalmic Cases admitted during the Year 1894. London: J. Vincent and Son. [1895.]—This compilation consists solely of a number of tables and statistics, and is a proof, where proof is scarcely needed, that good work is being done at the London Temperance Hospital, the physician to which was Sir B. W. Richardson, whose recent death is regretted by the profession at large. For those who have access to the hospital notes the publication affords a convenient index, but it is scarcely more than this. In the table of "special operations," which includes three ordinary operations for excision of varicocele, a short column of "remarks" in very condensed English does not afford sufficient information for safe deductions to be formed as to the general value of the various surgical procedures adopted. In the portion devoted to ophthalmic operations (which we

notice includes all the period from 1888 to 1894) the information is still more deficient. In hardly any case is the appearance or maturity of the lens specified, and in the table of "Hard Cataracts" the "remark" *hard cataract* or *senile cataract* does not convey further information. In the table of "Soft Cataracts" (which, by the way, contains a Morgagnian cataract), the "result" in each case is left blank. Only twenty per cent. of the extractions required subsequent discission, but why the proportion is so small is left a matter of conjecture.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XIII. Dublin: Fannin and Co., Ltd. 1895.—This volume might well be known as a small-pox number, inasmuch as there are no less than three papers on this subject. Dr. J. W. Moore advocates the complete exclusion of daylight, or the use of tightly-closing red curtains or windows of red glass for the purpose of excluding the actinic rays. These rays are also responsible for Dr. H. C. Tweedy's case of argyria, after five years' treatment of locomotor ataxia by nitrate of silver pills; the patient continued to take the silver salt at intervals for twenty-three years, and he must have taken more than two thousand grains of the drug. We may add that the mention of the chemical action of light rays has not in this case led up to the new photography, for there is no skiagram in the volume.

Transactions of the American Gynecological Society. Vol. XX. Philadelphia: Wm. J. Dornan. 1895.—This volume contains many valuable papers on such vexed questions as hysterectomy for fibroids, the value of Alexander's operation, deciduoma malignum, and other subjects of interest to the abdominal surgeon and gynæcologist. The discussions which followed the reading of these papers are given in full, and we may therefore regard the work as containing the latest views of most of those who have made American surgeons so justly famous in this department. Its pages are full of the practical thoughts of practical men, and there is scarcely an article that can be read without profit. The book is well bound, and contains some well-executed plates. In addition to its own index, the volume contains a most useful index to vols. i. to xx.

Transactions of the American Pediatric Society. Vol. VII. New York: Rooney & Otten Printing Co. 1895.—In this country we have no society to publish cases of children's diseases which are worthy of being recorded, and the American Pediatric Society, consisting of members from the States and the Dominion, is to be congratulated on the useful publication it has sent forth. All the papers are of great practical interest and well worth careful perusal. It opens with a notice of the poem of Hugh Downman, parson and doctor of Exeter in 1770, on "Infancy," in six books in iambic pentameters. The poem

is curious and shows the very sound knowledge held on the bringing-up of children, though the information is veiled in somewhat pedantic verse.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XV. J. & A. Churchill. 1895.—This volume resembles its predecessor in containing a number of very valuable papers, some of them abtruse, others well worthy of the perusal of every practitioner. It commences with Gowers's valuable paper on "Subjective Visual Sensations," particularly bearing on epilepsy and migraine; there is a most exhaustive report of a case of filaria, too, by Argyll Robertson. The disease seems to be confined to the West Coast of Africa, particularly the region of Old Calabar. It would appear that the worm passes from the blood to the eye, and not from without through the conjunctiva or skin. The movements of the worm are pretty extensive, at any rate it passes with ease from one eyeball to the other. Lawford has papers on "Hydatid Cyst of Orbit," and on "Ophthalmia Nodosa," which latter usually follows injury to the eye by a caterpillar of the family Bombycidæ. Treacher Collins gives several papers; one on "Lamellar Cataract and Rickets," quoting the opinions of several oculists in Australia, where rickets and lamellar cataract are both rare. Other equally meritorious papers are contained in the book, which is well worthy of careful perusal, and is very well published.

Transactions of the Dermatological Society of Great Britain and Ireland. Vol. I. London: H. K. Lewis. 1895.—This volume is the result of a new departure. As the Dermatological Society of London was considered too exclusive, the Dermatological Society of Great Britain and Ireland was started in 1894. Dr. Pye-Smith's presidential address was able, comprehensive, and very interesting. At the first Congress of this Society, Dr. Byrom Bramwell gave an address on the thyroid treatment of skin diseases; at the other meetings many interesting papers were read and cases shown. We must not expect too much from the first issue of a new society, but for one with such a comprehensive name 91 pages are a little mean for the record of a year's work, and we hope to see future volumes enriched with appropriate illustrations.

Transactions of the American Laryngological Association. New York: D. Appleton and Company. 1896.—From cover to cover this volume is an unbroken record of valuable work, for the most part by American rhinologists whose names are familiar to rhinal specialists on this side of the Atlantic. One of the most useful and original groups of articles is that which refers to suppurative accessory sinus disease, and the contribution on tuberculous disease of the upper air passages is very complete.

Transactions of the Epidemiological Society of London. New Series. Vol. XIV. London: Shaw and Sons. 1895.—The contents of this volume maintain the high average which former issues have led us to expect. Dr. Shirley Murphy's presidential address covers a wide field in discussing in practical and suggestive manner "The Study of Epidemiology," and Dr. Klein contributes a paper of special interest on "The Relation of Bacteria and their Toxines." A clear and excellent photograph of the late Sir George Buchanan forms a fitting frontispiece to the volume, and the Obituary contains an appreciative notice of this distinguished Chief of the Medical Department of the Local Government Board.

The Laryngoscope. St. Louis.—We gladly welcome this monthly addition to our Exchange-list. It began its existence in July, and has for its editors Dr. Frank M. Rumbold and Dr. M. A. Goldstein, who are supported by an influential staff of assistant and foreign editors. We are told that it is the intention of the new journal to present to the profession the essence of practical experience of those interested in diseases of the nose, throat, and ear. It is not published solely for the benefit of the specialist, but for the "busy and ever-advancing general practitioner" as well. The first number leads off with a very clear and practical article on the photo-fluoroscope, by Dr. J. Mount Bleyer, with excellent illustrations of the apparatus, and of skiagrams of intubation tubes in the larynx and the trachea; hay fever is dealt with by Dr. Seth Scott Bishop; lingual tonsils by Dr. E. R. Lewis; then follows the first part of the clinical investigation of ear diseases, by Dr. Dundas Grant; Dr. Lederman discusses petro-mastoid necrosis; Dr. J. E. Schadle, post-nasal adenoids. The rest of this excellent number is taken up with descriptions of new instruments and extracts from current literature. The second number quite maintains the high standard of the first. The editors are much to be congratulated on their first endeavours, and if future numbers are equal to the early ones, *The Laryngoscope* deserves a successful and prosperous career.

Letts's Diaries—Office, Pocket, and Medical Editions for 1897. London: Cassell & Company Limited.—Letts's Diaries have stood the test of many years' experience, and are still in high favour. We are very pleased with the assortment we have just received. No. 8 Office Form, containing one day only on a page, should afford ample opportunity for all diarists, except the most prosy. A special feature of the book is a tablet on the inside of the back cover for receiving notes with slate or lead pencil, which can be easily erased. Two Pocket Editions, Nos. 20 and 22, are specially attractive. They have a week in an opening and are fitted into most tempting wallets, with receptacles in one case for papers and in the other for cards, stamps, &c. The Medical Diaries are handsome productions and are in two

sizes, one with space for 54 patients, and the other for 108. They offer many conveniences. The tendency of these things is to get too bulky, and we should prefer to see these particular issues without the advertisements which are bound in with them. We have received from the same firm a sample of their Medical Prescription Copyist, one of the well-known forms for using with carbon paper. It is the least attractive in outward show, but is no doubt intended to be received into a case, to which the price on the cover probably refers, although this is left to be guessed.

Visiting List. Bristol: John Wright & Company. 1897.—This list has again been improved in minor details, and is now issued in three forms: *A*. Monthly, with fixed dates. *B*. Perpetual. *C*. A new weekly list arranged for 80 patients. *A* and *B* arranged as monthly lists have proved to be most convenient, complete, and time-saving: they avoid the necessity for re-writing names of chronic cases every week. The device of ruling each alternate line in red ink is very convenient for rapid reference. A pencil has now been added, and the lists appear to be as complete as ingenuity can make them.

Sixty-first Annual Report of the British Medical Benevolent Fund, for the Year 1895. London: Morton & Burt.—It may be convenient here to re-state that the objects of this fund are: (1) To afford immediate pecuniary relief to distressed qualified members of the medical profession, their widows or orphans. (2) To grant annuities to such after they have attained sixty years of age. In 1895 there were 212 applications for grants, but only 158 of these cases could be relieved. Amongst them the sum of £1,548 was distributed. The annuitants number 107, and receive altogether £2,155. We are grieved to see Bristol so poorly represented in the subscription list. We miss several well-known names. Surely it should be the exception and not the rule for a medical man not to subscribe to this excellent fund, so carefully and wisely administered.

A new journal is announced for 1897, "in which Scottish work and teaching in all departments of Medicine are to be more fully represented than they have hitherto been." With a large staff of contributors from Edinburgh, Glasgow, Aberdeen, and Dundee, this new monthly should have a brilliant future. It is to be called *The Scottish Medical and Surgical Journal*, and is to be published by Mr. William F. Clay, of Edinburgh.

The *Journal of Nervous and Mental Disease* announces that its Editors are now Dr. Chas. L. Dana, Dr. F. X. Dercum, Dr. Philip Coombs Knapp, Dr. Chas. K. Mills, Dr. Jas. J. Putnam, Dr. B. Sachs, and Dr. M. Allen Starr. The address of the Managing Editor, Dr. Chas. Henry Brown, is 25 West 45th Street, New York.

Notes on Preparations for the Sick.

Carniferrine.—Lucius & Brüning, Hoechst on the Maine.—This powder, which can be obtained through the Jeyes' Sanitary Compounds Co., contains thirty per cent. of iron in organic combination, being an iron salt of phospho-carnic acid. It is prepared from extract of meat. The dose is eight grains per day, given in powder with sugar. We cannot have too many iron preparations. This is one of the many which are quite worthy of trial. As a rule we prefer the inorganic iron preparations, but they do not always answer our expectations, when the organic compounds sometimes do better.

Antikamnia.—The Antikamnia Chemical Co., St. Louis.—This preparation, for which Mr. John M. Richards is the British agent, is sent out in the form of powder or tablet. For several years this drug has been more or less in use for the relief of pain, but has not so firmly established itself in this country as in the home of its manufacture. It is described as a combination of coal tar derivatives of the series C_nH_{2n-6}, into which the amines have entered, forming the various amido-compounds. The white, alkaline powder is moderately soluble in water, but freely so in spirits. The five-grain tablet is a convenient mode of administration, three of them giving a full dose for adults. They appear to give relief to neuralgic pains, and have a sedative effect on the nervous system when over-excited.

Pumiline Zalones.—G. & G. Stern, London.—**Zalones** are a variety of the *genus* lozenge containing a basis of chlorate of potash, milk sugar, gum arabic and liquorice. Each contains one minim of Pumiline essence and one minim of menthol. It is a pleasant, and should prove to be a very useful lozenge, in spite of its somewhat heathenish designation, which even the promoters spell differently, as in one place we find them called "Zablones."

Peptonised Cocoa and Milk. Café Zylak.—Savory & Moore, London.—The well-known and most useful preparation of peptonised milk and cocoa is much appreciated by those who do not dislike sweet things and have no objection to cocoa. A similar preparation with coffee instead of cocoa must meet with

a large demand. Where peptonised milk is needful these two preparations give us an opportunity of a variation in the diet which is much appreciated, and the difficulties of peptonisation are escaped. The coffee preparation is already giving much satisfaction.

Maltine with Coca Wine.—THE MALTINE MANUFACTURING COMPANY LTD., London.—Each fluid ounce of this viscid luscious fluid contains the active ingredients of thirty grains of coca leaves. It must therefore combine the invigorating offices of the coca with the digestive and nutrient qualities of a good preparation of maltine.

Neo-Kola.—THOMAS CHRISTY & Co., London.—New beverages are always in demand, and this one has many special features. It is unmixed with any foreign substance beyond a mere trace of vanilla flavouring. It contains appreciable quantities of caffeine and theobromine with kolanin. It makes an excellent beverage, and is less likely to disturb the digestion than the ordinary kinds of tea, coffee, or cocoa. For the tired brain-worker it is likely to be a very efficient restorative.

Nutrient Suppositories.—PARKE, DAVIS & Co., London.—Each of these excellently made suppositories contains about 125 grains of lean beef, almost entirely peptonised. We have a decided preference for fluid enemata, but in cases where the fluids are not retained, or will not be tolerated from any cause, the nutrient in suppository form becomes essential. Rectal food should obviously be pre-peptonised, and these suppositories provide a soluble form of peptone, which should in due time after solution become readily absorbed.

Soloids: Carbolic Acid; Corrosive Sublimate; Potassium Permanganate; Silver Nitrate; Zinc Chloride.—BURROUGHS, WELLCOME & Co., London.—If any of our readers are unaware of the existence of these useful preparations, it will be merely necessary for us to call attention to them, in order that their advantages might be at once appreciated. The convenience of being able with so much ease to prepare lotions of definite strength will be at once apparent. Any risk of confounding them with the better known tabloids is obviated by the difference in shape. Each of the **Carbolic Acid** soloids contains exactly five grains, and when dissolved in five ounces of water makes a solution suitable for use as a disinfectant or antiseptic spray.

The strength of the others is as follows: **Corrosive Sublimate,** 1.75 grains; **Potassium Permanganate,** five grains; **Silver Nitrate,** one grain; **Zinc Chloride,** one grain.

Dr. Balme's Sublimated Paper.—B. KÜHN, London.—Each leaf of this **Paper** contains eight grains of perchloride of mercury, and will rapidly dissolve in water. One leaf in a quart of water makes a lotion of 1 : 2500.

Taka-Diastase.—With reference to the notice on page 277 in our last number, it has been pointed out that the ferment will do more than we implied, for it is capable of converting over one hundred times its weight of starch into sugar, *in a glass vessel in ten minutes, with the products of its conversion hampering its action.* In three hours it will convert over one thousand times its own weight. The powder appears to be the fungus itself, the Eurotium oryzæ, which is grown on wheat bran.

The compressed tablets, each containing 2½ grains, form a sufficient and convenient dose; they should be taken at the commencement of a meal in order that the diastasic action may come into play before the food becomes saturated with acid gastric juice.

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

Annual Meeting, October 14th, 1896.

Mr. ARTHUR W. PRICHARD, President, in the Chair.

After a vote of thanks to the retiring President (Mr. Arthur W. Prichard) had been unanimously passed, Dr. A. E. Aust Lawrence (the President-elect) took the Chair, and read his introductory address (see page 289), for which a cordial vote of thanks was given him. The Honorary Secretary (Mr. J. Paul Bush), the Editorial Secretary (Dr. Bertram M. H. Rogers), and the Honorary Librarian (Mr. L. M. Griffiths) read their annual reports, which were adopted. The following officers were chosen for the ensuing year:—President-elect; Dr. J. E. Shaw: Honorary Secretary; Mr. J. Paul Bush: Honorary Librarian; Mr. L. M. Griffiths: Members of Committee; Dr. J. Michell Clarke, Mr. J. Dacre, Mr. W. H. Harsant, Dr. Bertram M. H. Rogers, Mr. G. Munro Smith, and Dr. H. Waldo: Representatives of the Society on the Committee of the Bristol Medical Library; Mr. L. M. Griffiths, Dr. G. Parker, and Dr. J. Swain.

November 11th, 1896.

Dr. A. E. AUST LAWRENCE, President, in the Chair.

Dr. BARCLAY J. BARON showed a case of a healthy farm labourer, 39 years of age, who came to him with a history of acute œdematous laryngitis, for which laryngotomy had been performed. On admission to the Bristol General Hospital the whole of the larynx was found to be in a state of acute inflammation, the inflamed vocal cords lying in apposition in the middle line. So long as he had his laryngotomy tube in his larynx the condition did not in any way alter. Dr. Baron recommended him to submit to tracheotomy, the laryngotomy tube being then removed. Very soon after this the inflammation subsided, and first one vocal cord and then the other left the middle line, and a web occupying the anterior three-fourths of the glottis was visible. This Dr. Baron divided with a cutting dilator several times, and passed Schrötter's bougies; and now the patient is left with a piece of web-tissue uniting the under surface of the anterior sixth of the vocal cords. His voice is good, and he can do all that a labourer has to do, and so nothing further in the way of operation will be done. The two points of interest in the case are: (1) The great rarity of ulceration of the inner edges of both vocal cords occurring as a result of simple non-syphilitic inflammation of the larynx, and this permitting of the formation of the web seen. (2) The laryngotomy tube was responsible for keeping up the laryngeal inflammation, and only when it was removed did resolution of this occur. Dr. Baron considers that where there is acute œdematous inflammation of the larynx, and an opening into the windpipe is necessary, tracheotomy should be performed and not laryngotomy.—Dr. P. WATSON WILLIAMS had met with two cases of web-formation extending between the vocal cords. One was congenital in origin, the second being the result of syphilitic disease.

Dr. P. WATSON WILLIAMS showed (1) a case of tuberculous disease of the larynx very greatly improved by curettement and the local application of lactic acid and of pure guaiacol; (2) a case of suppurating perichondritis of the thyroid cartilage, with resulting laryngeal stenosis; (3) a case in which an almost complete nasal stenosis resulted from persistence of the normal fœtal occlusion of the nasal passage.

Mr. C. A. MORTON showed a man, aged 55, from whom, on June 12th, he had removed the right half of the tongue and floor of the mouth, and the right tonsil, for epithelioma, by external pharyngotomy. There had been epitheliomatous ulceration involving the back and right side of the tongue and floor of the mouth, and the right tonsil, and the patient had only been able to swallow fluids, and those only with much distress. The lingual artery was first tied on the left side, and then tracheotomy performed and a Hahn's tube introduced into the trachea. An incision was then made on the right side of the neck, as in Kocher's method of excising the tongue; but the jaw was also divided at the junction of the body and ascending ramus, and thus free access gained to the tonsillar region. A portion of the external pterygoid muscle had to be removed with the tonsil. The lingual artery was tied just as it left the external carotid, and other arteries as they were cut, the division of the jaw giving sufficient room to deal with all bleeding vessels. The external carotid artery was not ligatured, as in several recorded cases secondary hemorrhage has followed the ligation of the artery in what, on account of the free communication with the mouth, must be a septic wound. The tongue was found to be infiltrated with growth almost down to the

hyoid bone, and had to be divided close to that structure, thus fully exposing the epiglottis. The wound was not closed, but was plugged with gauze; and the patient fed by a tube left in the stomach, with the end protruding through the wound in the neck. He rapidly gained flesh from the constant feeding through the tube, and can now swallow mince-meat and other kinds of food; the opening in the neck has been quite closed for some months, and he has returned to work as a fireman on an engine. There is no sign of any recurrence so far, *i.e.* five months after the operation.—Dr. J. Lacy Firth mentioned a case in which he had recently removed an upper jaw for epithelioma; the glands having been removed a week earlier by Mr. Barclay, who, having to leave home, had left the case in his charge. There was a very rapid recurrence in the neck; and this was like the event of a case quoted by Mr. Watson Cheyne, in which he also did the operation in two stages. Operating in two stages was therefore bad practice.—Mr. W. M. Barclay referred to the case, mentioned by Dr. Firth, in which he had done the original operation of removal of the secondary glands. It was intended that the entire operation should be concluded at once; but after the glandular extirpation it was thought wiser to defer the removal of the growth in the mouth. The point to which he wished to draw attention was as to the cause of the very rapid recurrence in the neck. He recalled a suggestion of Mr. Watson Cheyne's, that these rapid recurrences might result from an actual implantation of cancerous material in the wound by a rupture of the infected glands, rather than from the cut lymphatic vessels leading from the glands to the primary growth. If this theory be ever correct, a very important practical point is involved; viz., that in all operations for removal of carcinomatous glands every endeavour should be made to remove them *en masse*, without opening their capsules proper or adventitious.—Mr. Morton said the point raised by Dr. Firth and Mr. Barclay was one of great interest. Mr. Watson Cheyne hoped by first removing the glands and tying the external carotid artery he would get the vessel so satisfactorily closed in the aseptic wound that secondary hemorrhage would not occur; but he found that the wound would become infected with epitheliomatous material from the primary growth through the cut lymphatic vessels, and he thought that early recurrence in one of his cases had been due to this.

Two patients were sent by Dr. H. Waldo. The first was a case of adenoma sebaceum in a girl aged 16, who had had much local treatment, resulting in considerable scarring. She has been advised to become an in-patient at the Bristol Royal Infirmary, in order that the remaining diseased surface may be scraped. The second case was one of alopecia areata in a girl aged 12, who began to lose her hair a short time after an attack of influenza about two years ago. In a few weeks it all came off. There was not a smoothness of the billiard ball character, as there was an extremely soft down in very small quantity. Treatment by Stoker's cap was begun on August 8th, 1896. It was kept full of oxygen, and now the scalp is nearly covered with hair, which is thin and silky, and an inch or more in length.

Dr. J. Michell Clarke read an account and showed microscopic specimens and lantern slides of two cases of congenital syphilitic cirrhosis in infants, illustrating the progress of the disease. He also showed lantern slides and specimens of a cavity in the cord (syringomyelia). The cavity was situated behind the posterior commissure of the cord, and was surrounded by embryonic tissue. It was about 1½ inches in length and about ⅛ inch in transverse diameter. There were

no symptoms during life. The patient was a man who died from pernicious anæmia, and whose case was reported in the September number of the *Bristol Medico-Chirurgical Journal* (p. 232). A brief account was given of the mode of origin of these cavities in the cord in syringomyelia, and of the symptoms which characterize the affection. Dr. Clarke also showed sections of the cord from another case of pernicious anæmia, in which there was sclerosis of the columns of Goll, of part of the columns of Burdach, and of the crossed pyramidal tracts throughout the whole extent of the cord; and remarked on the not infrequent occurrence of such degenerations in pernicious anæmia.

J. PAUL BUSH, *Hon. Sec.*

Newport Medical Society.

Annual Meeting, October 7th, 1896.

Dr. A. GARROD THOMAS in the Chair.

The annual report was read and adopted, and the following elected officers for the ensuing session:—President; Mr. G. A. Davies: Vice-President; Mr. H. M. Brewer: Honorary Secretary; Mr. W. Basset. The two vacancies on the Committee were filled by the election of Messrs. A. G. Thomas and H. E. Williams.

Mr. O. E. B. MARSH showed two cases of lateral dislocation of the elbow.

Dr. D. M. BEDDOE showed two cases of congenital disease of the pulmonary artery.

Mr. W. BASSET showed a case of congenital fracture of the leg in a child six years of age.

W. BASSET, *Hon. Sec.*

The Library of the Bristol Medico-Chirurgical Society.

At the Annual Meeting, held on October 14th, 1896, Mr. L. M. Griffiths, the Honorary Librarian, read the following Report:—

Since the last Annual Meeting 686 volumes have been received into the Society's library. As 43 volumes have been given to other libraries, the number of volumes actually in the library at the present time, including 556 duplicates, is 5173. The periodicals reserved by the Society number 158. Many volumes of periodicals are required to complete sets. Gifts of these, or money for the purpose of obtaining them, will be very acceptable.

The donors of books during the twelve months have been:—The Bootle Public Library, Mr. C. W. J. Brasher, the British Medical Association, Dr. J. Michell Clarke, Mr. F. R. Cross,

Dr. George M. Gould, Mr. L. M. Griffiths, l'Institut international de Bibliographie, Mr. C. M. Jessop, the Laryngological Society of London, the Ophthalmological Society of the United Kingdom, Mr. Stephen Paget, Mr. E. Picton Phillips, Dr. W. Warren Potter, the Royal Academy of Medicine in Ireland, the Royal College of Surgeons of England, Mrs. R. B. Ruddock, Mr. E. J. Sheppard, Mr. J. Greig Smith, Dr. R. Shingleton Smith, the Surgeon-General United States Army, Dr. James Swain, Dr. P. Watson Williams, and Messrs. J. Wright & Co. One framed picture has been presented by Mr. G. Barry Hart and one by Mr. H. E. Hetling.

A library such as ours should, in addition to containing the best medical books and periodicals of to-day, aim at collecting the literature of bygone ages, thus preserving for us in its original form the excellent work done by our forefathers in building up the present noble structure of medical art and practice. In the library also should be found a place for matters of a more personal and local nature, which in the future may prove of interest, if not of use, to the gleaner of half-forgotten trifles. These would include newspaper cuttings, pamphlets and magazine articles of ephemeral value, professional reports, portraits, illustrations of things or places having a medical bearing, and many other items which will occur to every member. Any of these will at all times be gladly received.

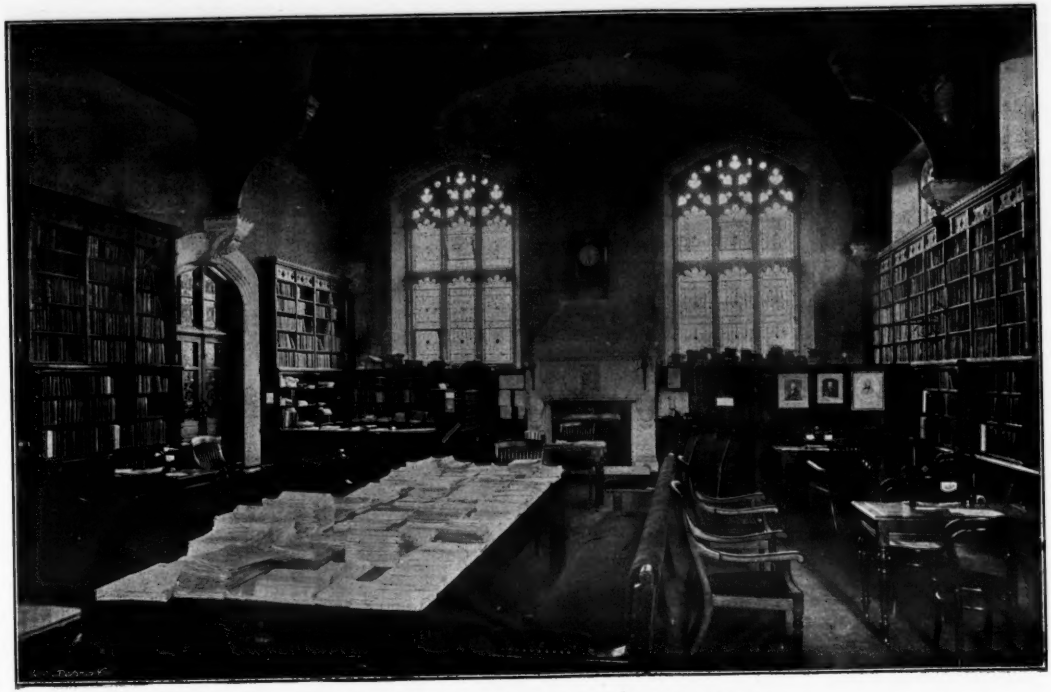
I feel sure that as time goes on the members of this Society appreciate more and more the peculiar constitution of the Bristol Medical Library,[1] which, uniting four libraries of the chief Medical Institutions of the city, now enables them to consult a collection of 15,362 volumes and 194 current periodicals.

The following donations have been received since the publication of the list in September:

November 30th, 1896.

J. Michell Clarke, M.D. (1) ... ... 3 volumes.
J. Ewens (2) ... ... 1 volume.
L. M. Griffiths (3) ... ... 5 volumes.
W. H. Harsant (4) ... ... 1 volume.
W. Warren Potter, M.D. (5) ... ... 3 volumes.
Lady Reynolds (6) ... ... 157 ,,
J. Greig Smith (7) ... ... 1 volume.
R. Shingleton Smith, M.D. (8)... ... ... 13 volumes.

[1] By the courtesy of the authorities of University College I am able to give a reproduction of the latest photograph of the library that has been taken. The picture, however, does not show a third of the actual shelf accommodation.



MEDICAL LIBRARY, UNIVERSITY COLLEGE, BRISTOL.

TWENTY-SECOND LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Abercrombie, J. ... *Des Maladies de l'Encéphale et de la Moelle épinière.* (Tr. par A. N. Gendrin). ... ... (6) 2e Éd. 1835
Allbutt, T. C. [Ed.] *A System of Medicine.* Vol. I 1896
Althaus, J. ... ... *On Paralysis, Neuralgia, &c.* ... ... (6) 3rd Ed. 1864
Barr, T. ... ... *Diseases of the Ear* ... .2nd Ed. 1896
Barwell, R. ... ... *Lateral Curvature of the Spine* ... ... 5th Ed. 1895
Béclard, P.-A. ... *Élémens d'Anatomie générale* ... (6) Nouv. Éd. 1828
Beigel, H. ... ... *On Inhalation* ... ... (6) 1866
Billing, A. ... ... *On Diseases of the Lungs and Heart* ... ... (6) 1852
Bowles, R. L.... ... *The Inaugural Address, St. George's Hospital,* 1892 (6) 1892
Bruck, L. ... ... *The Sweating of the Medical Profession by the Friendly Societies in Australasia*... ... ...[1896]
Charcot, J.-M. ... *Leçons sur les Maladies du Système nerveux.* 2 vols. (8) 3e Éd. 1877
Chloroform, The Lancet and the Hyderabad Commissions on ... ... [N.D.]
Clarke, W. M. ... *The Natural History of Disease* ... ... (3) 1879
Climates and Baths of Great Britain, The. Vol. I. 1895
Clubs, The Battle of the . ... [1895-96]
Colman, W. S. ... *Section Cutting and Staining* ... ...2nd Ed. 1896
Cornil et V. Hanot, H. Hérard, V. *La Phtisie pulmonaire* (8) 2e Éd. 1888
Crookshank, E. M. *Bacteriology and Infective Diseases* ... ... 4th Ed. 1896
Dalby, Sir W. B. ... *Aural Surgery* ... ... 3rd Ed. 1896
Davey, J. G. ... ... *On Life and its Lessons* ... ... (3) 1883
Davy, J. ... ... *Researches, Physiological and Anatomical.* 2 vols. (6) 1839
Debove, — ... ... *Leçons sur la Tuberculose parasitaire* ... . (8) 1884
Dictionnaire (Nouveau) de Médecine et de Chirurgie pratiques (Jaccoud). Tomes I.—XIII. .. .. (6) 1864-70
Diphtheria Antitoxic Serums, The Lancet Special Commission on the relative strengths of 1896
Doyen, E. ... ... *Traitement des Suppurations pelviennes* 1896
Ewart, W. ... ... *Gout and Goutiness* 1896
Falret, [J.-P.] ... *Leçons cliniques de Médecine mentale* ... ... (6) 1854
Farquhar, T. Fox and T. *Endemic Skin and other Diseases of India* (8) 1876
Fox, E. L. ... ... *The Medulla Oblongata* ... ... (3) 1881
Fox and T. Farquhar, T. *Endemic Skin and other Diseases of India* (8) 1876
Foxwell, A. ... ... *The Enlarged Cirrhotic Liver* ... ...[1896]
Glasgow Pathological and Clinical Society—Discussion on Albuminuria (8) 1884
Goodman, J. ... ... *Nervous Origin of Disease* ... ... (6) 1854
Gould, G. M.... ... *The Student's Medical Dictionary* ... ...10th Ed. 1896
Green, J. H. ... ... *Mental Dynamics* ... ... (6) 1847

Haig-Brown, Florence A. *Hints on Elementary Physiology* 1896
Halliburton, W. D. *Kirkes' Hand-Book of Physiology* ... ...14th Ed. 1896
Hanot, H. Hérard, V. Cornil et V. *La Phtisie pulmonaire* ... (8) 2e Éd. 1888
Hartridge, G.... ... *Refraction of the Eye* ... ... 8th Ed. 1896
Harvard University, Addresses and Exercises at the One Hundredth Anniversary of the Foundation of the Medical School of, Oct. 17th, 1883 ... ... (6) 1884
Heberden, W. ... *Commentarii de Morborum Historia et Curatione* (6) Editio Altera 1807
Hérard, V. Cornil et V. Hanot, H. *La Phtisie pulmonaire* (8) 2e Éd. 1888
Hewitt, G. ... ... *The Diseases of Women* ... (6) 2nd Ed., 1868; (6) 3rd Ed. 1872
Hoblyn, R. D. ... *Dictionary of Medical Terms* ... ... (6) 9th Ed. 1868
Holth, S.... ... ... *Synsfeltundersogelser* 1896
Infectious Disease (Notification) Act, Difficulties under the 1895
Jackson, E. ... ... *Skiascopy* ... ... 2nd Ed. 1896
James, A. ... ... *Cliniques* 1896
Kirkes, [W. S.] ... *Hand-Book of Physiology.* 14th Ed. By W. D. Halliburton 1896
Lee, A. B. ... ... *The Microtomist's Vade-Mecum* ... ... 4th Ed. 1896
Mahlendorff, P. ... *Voice Production* ... ... [N.D.]
Manners-Smith, B. C. A. Windle and T. *Surface Anatomy* ... 2nd Ed. 1896
Meryon, E. ... ... *On Paralysis*... ... ... (6) 1864
Miquel et A. Rueff, P. *Tuberculose pulmonaire* ... ... (8) 1888
Pathological Society of London, Catalogue of the Preparations, Drawings, etc., exhibited at the Jubilee of the ... ... (8) 1896
Peacock, T. B. ... *Valvular Disease of the Heart* ... ... (6) 1865
Physiology, An American Text-Book of (Ed. by W. H. Howell) 1896
Powell, G. D. ... *Medical Electricity* ... ... (6) 1869
Plumbers' Work, The Lancet Special Commission on 1896
Richards, P. A. E. *Practical Chemistry* 1896
Ridge, B. ... ... *Physiology of the Uterus, Placenta, and Fœtus* ... (6) 1845
,, ... *Glossology* ... ... (6) 2nd Ed. 1857
Rostan, L. ... ... *Recherches sur le Ramollissement du Cerveau* (6) 2e Éd. 1823
Rueff, P. Miquel et A. *Tuberculose pulmonaire* ... ... (8) 1888
Saundby, R. ... ... *Lectures on Renal and Urinary Diseases* ... 2nd Ed. 1896
Semb, O. ... ... *Om de papillære Ovarial-kystomer* 1896
Simson, T. ... ... *On Vital and Animal Actions* ... ... (6) 1752
Spallanzani, [L.] ... *Tracts on the Natural History of Animals and Vegetables.* 2 vols. (Tr. by J. G. Dalyell) (6) 2nd Ed. 1803
Swayne, J. G. ... *Medical Diagnosis and Treatment, Past and Present* (3) 1880
Swieten, G. van ... *Commentaries upon the Aphorisms of Boërhaave.* Translated. (6) Vols. II.—V., 1754-59; VII., VIII., 1758; X.—XIV., 1765
Therapeutics, An American Text-Book of Applied (Ed. by J. C. Wilson and A. A. Eshner.) 2 vols. 1896
Tilt, E. J. ... ... *On Uterine Therapeutics* ... ... (6) 3rd Ed. 1868
Tubby, A. H. ... ... *Deformities* 1896

Tuberculose, Études sur la. Tomes I.; II., fasc. i. ... . (8) 1887-88
Tweedie, A. [Ed.] ... *A System of Practical Medicine.* 5 vols.... ... (6) 1840
Webster, J. C. ... *Practical and Operative Gynecology* 1896
West, C. ... ... *The Profession of Medicine...* 1896
Windle and T. Manners-Smith, B. C. A. *Surface Anatomy* ... 2nd Ed. 1896

TRANSACTIONS, REPORTS, JOURNALS, &c.

Académie royale de Médecine, Mémoires de l' (6) Tomes V.—XVI. 1836-52
Alabama, Transactions of the Medical Association of the State of ... 1896
American Association of Obstetricians and Gynecologists, Transactions of the ... ... Vol. VIII. 1896
Annals of Surgery ... ... Vols. (4) IX., 1889; XIII., XIV. 1891
Archives de Neurologie ... ... (1) Tomes XVII.—XXII. 1889-91
British Balneological and Climatological Society, Transactions of the 1896
British Medical Association, Memorandum and Articles of Association and By-laws of the ... ... (3) 1883
British Orthopædic Society, Transactions of the ... ... (2) Vol. I. 1896
Buffalo Medical and Surgical Journal ... ... Vols. (7) XXIX., 1890; (5) XXX.—XXXII. 1891-93
Clinical Journal, The ... ... Vol. VIII. 1896
Clinical Society's Transactions ... ... Vol. XXIX. 1896
Congrès pour l'Étude de la Tuberculose, 1e Session, 1888. 2 vols. (8) 1889
Dermatological Society of Great Britain and Ireland, Transactions of the... ... ... Vol. II. 1896
Epidemiological Society of London, Transactions of the. N.S. Vol. XV. 1896
Hospital, The ... ... Vol. XX. 1896
Medical Chronicle, The ... ... N.S. Vol. V. 1896
Medical News, The ... ... Vol. LXVIII. 1896
Medical Times and Gazette, The (6) 1876, Vol. II.—1877, Vol. II., 1879-80
Michigan State Medical Society, Transactions of the ... Vol. XX. 1896
New Hampshire Medical Society, Transactions of the 1896
Ohio State Medical Society, Transactions of the 1896
Philosophical Transactions, Abstracts of the, 1800-30. 2 vols. (6) 1832-33
Practitioner, The ... ... Vol. LVI. 1896
Quarterly Medical Journal, The ... ... Vol. IV. 1896
South Carolina Medical Association. Transactions of the 1896
University Medical Magazine ... ... Vol. VIII. 1896
University of London—Minutes of the Senate ... ... (6) 1881
West London Medico-Chirurgical Society, Proceedings of the. Vol. VII. 1896

Local Medical Notes.

BRISTOL.

At a quarterly meeting of the Comitia of the Royal College of Physicians of London, held on October 29th, Theodore Fisher, M.D. Lond., was elected a Member.

University College.—The Annual Distribution of Prizes to the successful students of the Faculty of Medicine took place in the Medical Library of the College on November 25th. Mr. Albert Fry, Chairman of the Council, presided, and in his address to the students said that he occupied his present position at the request of the Faculty of

Medicine. The Council were extremely anxious that the medical department, now that it was housed in such complete and handsome buildings, should continue worthy of its old reputation, and should also make full use of its present advantages. Every facility was afforded for the acquirement of a complete and thorough education, and students could not too clearly bear in mind that now was the time when the foundation of their future life would be laid. It should be their aim by their diligence to make the College one of the most eminent schools of medicine in the United Kingdom, and in advancing its reputation they would do honour to themselves and promote their own success in after life.

The following students have recently passed examinations:

University of London.—*Final Examination for M.B. Degree* (Second Division)—G. B. Price, M.R.C.S. Eng., L.R.C.P. Lond. (1st Class Honours in Obstetric Medicine).

University of Durham.—*Examination for M.B. Degree. First and Second Examinations*—C. O. Bodman.

Examining Board in England by the Royal Colleges of Physicians and Surgeons. — *Four Years' Curriculum. First Examination. Part II. Materia Medica* — F. C. Morgan, J. W. Wallace. *Five Years' Curriculum. First Examination. Part III. Elementary Biology* — F. H. Rudge. *Second Examination. Anatomy and Physiology*—H. Hemsted, P. G. Stock. *Final Examination. Medicine* — F. Anthony. *Surgery* — T. W. W. Bovey,* W. H. Cooper,* E. V. R. Woodford,* W. Smith.* *Midwifery*—F. P. Gill, J. J. S. Lucas, F. P. Mackie, J. C. MacWatters.*

Royal College of Surgeons of England. — *Fellowship. First Examination*—R. H. Chilton, M.R.C.S., L.R.C.P.Lond. *Final Examination*—A. E. H. Pinch, M.R.C.S., L.R.C.P. Lond.; W. M. Willis, M.R.C.S., L.R.C.P. Lond.

J. Odery Symes, M.D. Lond., has been appointed a Demonstrator of Anatomy.

Hospital for Sick Children and Women.—E. C. Taylor, M.D. Lond., F.R.C.S. Eng., has been elected House-Surgeon.

EXETER.

Devon and Exeter Hospital.—Rapid progress is being made with the new wing to this hospital. The total length of the new wing, including the sanitary towers, is about 140 feet, and from the ground to the ridge the average height is over 60 feet. The main walls are of brickwork, 18 in. in thickness throughout. The wing is three storeys high, and consists of three main wards, each containing twenty-four beds, and three small single-bed wards. The three main wards are 97 feet long, 26 feet 6 in. wide; each will be warmed by means of two central stoves (the vertical flues of which will be swept from the ground level) and eight hot-water coils. Each patient has 1,500 cubic feet of air space in the main wards. The floors are fire-proof, and are formed of steel joists with concrete and terra-cotta lintels, on which are laid teak floor-boards. At the further end of the wing there is a balcony to each floor, and a fire-escape staircase. The space underneath the wards will form a covered airing ground. Each floor has a linen-room, kitchen, pantry, etc.; and in the towers are bath-rooms, lavatories, etc., the walls of which are lined with white glazed

* Completes Examination.

bricks inside. An electric lift will be provided, running from the basement to the top floor, for patients, etc. The whole of the building is to be lit with the electric light, and there will be twelve wall plugs in each ward. Under the new arrangement the kitchens will occupy a floor of the old central building, and provision is to be made by a new system of lifts for the rapid distribution of meals to the various wards. Mr. C. Cole, 50 High Street, Exeter, is the architect.

Alvarenga Prize of the College of Physicians of Philadelphia.—The next award of this prize will be in July, 1897. Essays intended for competition may be upon any subject in Medicine. Particulars may be obtained from the Secretary of the College.

SCRAPS

PICKED UP BY THE ASSISTANT-EDITOR.

Medical "Bits of Old Bristol" (I.).—In the *Journal* for June (p. 174) there was a reference to the accommodation for lepers in Bristol. It was stated on the authority of Dugdale that a Leper Hospital, dedicated to St. John Baptist, was built at Lawford's Gate on land given for the purpose by John, Earl of Moreton. John became specially connected with Bristol because his brother, Richard I., had, amongst other grants, conferred upon him the Earldoms of Gloucester and Somerset. The grant of land must have been between 1189, when John was made Earl of Moreton, and 1199 when he became King. In 1200 there was a direction issued (*Rotuli Chartarum*, ed. 1837, I. i. 77*b*) concerning the protection of the lepers of St. John's; but this is the only official reference to them I have been able to find. In 1208 John granted the charter (*Op. cit.*, 175*b*) which is printed in full in Dugdale (*Monasticon Anglicanum*, ed. 1830, VI. ii. 670), who gives "Lacford" where *Rot. Chart.* reads "Laffard." It says "hac cartâ nostrâ confirmâsse leprosis juxta Bristoll, croftam extra portam Lacford, in viâ versùs Bathoniam," but makes no mention of any dedication to St. John. A leper hospital which was dedicated to St. Laurence is mentioned in 1215 (*Rotuli Litterarum Clausarum*, ed. 1833, I. 227*a*) and in 8 Henry III. 1223-24 (*Calendarium Rotulorum Patentium*, ed. 1802, 13). In 32 Henry III., 1247-48, it is mentioned twice (*op. cit.*, 22) and in a charter granted in that year reference is made, "magistro et fratribus hospitalis leprosorum S. Laurentii in suburbio Bristolli," (Dugdale, *Op. cit.*, 671). There is evidently great uncertainty about the existence of two leper hospitals in that neighbourhood. Mr. John Latimer, who has kindly helped me in this investigation, tells me it is possible that in the 1200 direction a mistake occurred in the name of the hospital or that afterwards a change was made in the dedication. In Tanner's *Notitia Monastica* (ed. 1787) it is said that St. Laurence's leper hospital "was in Bell lane, near St. John's church," but this must be a confusion with the Church of St. Laurence which was in that situation and was pulled down in 1580. At no time could Bell Lane have been said to be "in suburbio Bristolli," and certainly no accommodation for lepers could have been in a spot so near the centre of the town. In connection with the so-called St. John's leper hospital, the records cited by Tanner have, with the exception of the 1200 direction, nothing to do with lepers, and in so far as they deal with any hospital of St. John they probably all refer to St. John's in Redcliff. Tanner also refers to William Wyrcestre (1415-1479), but these references (pp. 260, 274 of the 1778 edition of the *Itinerarium*) are to St. John's in Redcliff, which was not a leper hospital. Tanner has, in addition, a reference to Leland (about 1538), whose mention, however, is of "S. John's by

Radeclife" (*Itinerary*, ed. Hearne, 1769, VII., 92). This confusion is continued in *Bristol Past and Present*, 1881 (vol. II., Index and pp. 15, 115).

The Hospital of St. Laurence was given by Edward III. to the College of Westbury (Atkyns, *The Ancient and Present State of Glocestershire*, 2nd ed., 1768, p. 421). In 13 Henry IV., 1411-12, there is a mention of a hospital "de Laffordesyarde in suburbio Bristoll'" (*Cal. Rot. Pat.*, 258*b*), which probably refers to that of St. Laurence, although no specific title is given. At the dissolution about 1535 the hospital, as part of the College property, was granted to Sir Ralph Sadler, when, of course, it ceased to be an asylum for lepers. Sadler was in high favour at Court, and when Elizabeth came to Bristol in 1574 "she first alighted at St. Laurence Hospital, changed some apparel and was met at Lawford's Gate by the Mayor and Council" (Evans's *Chronological Outline*). In 1629 it had become with its grounds of 205 acres the Manor House belonging to Robert Hooke, one of a celebrated Bristol family, a member of which gave his name to "Hook's Mills," where the Orphan House at the bottom of Ashley Hill now stands. According to Barrett the site of St. Laurence's Hospital "abutted south on London highway and Chapel-lane on the East." No remains of it are now known, but the name is perpetuated in Lawrence Hill.

William Wyrcestre seems to be the sole authority on St. Mary Magdalene's Leper Hospital. He refers to it twice: "Capella Sanctæ Mariæ Magdalenæ ab antiquo fundata cum hospitali gentium leprosarum scita est in parte boriali versus pontem de Bryghtbow ultra domum capellanorum Willelmi Canyngys" (*Op. cit.*, p. 206); "Ecclesia hospitalis domus Sanctæ Mariæ Magdalenæ leprosorum in occidentali parte de Radclyffe-hylle in boriali parte viæ ad pontem Bryghtbow" (*Op. cit.*, p. 260).

No one who wishes to learn something about the mediæval leper hospital, which had more the character of a refuge or an asylum than of a place for medical treatment, should omit to give close attention to Simpson's articles on the subject in the *Edinburgh Medical and Surgical Journal* (Oct., 1841, Jan., April, 1842).

It would be pleasant if we could believe there was a particle of truth in "The Rolle of Seyncte Bartholemeweis Priorie," which Chatterton professed to have found among the Rowley papers and which the credulous Barrett (*History of Bristol*, p. 428) accepted as genuine. It is stated in it that "Atte the ende of the courte ys the Lazarre howse for thylke who havethe the leprous brennynge," and that provision was made "toe shryve the leperes wythe 10 markys bie the yeere to a fadre of the blacke frierie to shrive the lepeirys and 50 markys in lyke tyme to dresse ande docke theyre sorres, sayinge, lette us cure both spryte & bodye. From the yate we passe toe the ache chambre where attendeth foure mastre barboure surgeonnes under the behylte of the Austynian Frere." The library is said to have contained "Gylbertines rolle of Ypocrates:—The same fryarres booke of brennynge, Johan Stowe of the cure of mormalles & the waterie leprosie—the rolle of the blacke mainger: F. Lewis a Wodefordes booke of ailes." It is added: "of the reste of the Lazar house bee cellis & beddis for the Lazars, beeynge manie in number, the onlie roome else ys the halle where the pryoure summoneth councel of Bredrenne of physique blacke whyte grey & odhers: whanne some doughtie worke ys to bee donne on a Lazar, and the mastre barber surgeonne recevyth theyre order, the fryeres havethe for attendance iij groates fothe syttynge as was lefte bie the wordhie knyghte Syr Johan Somerville—leste hurte ande scathe bee done to the lepers, the whych mote bee avoyded; the sayings & notises of freeres bee wrote yn a rolle from the whych the barbour surgeonnes learn muche ande none botte those of Seynte Bartlemews maye loke thereynne: by whych meanes the barboure surgeonis wyll bee servytours there wythoute paye to gayne knowleche of aylimentes & theyr trew curis."

If the fanciful pseudo-antique spelling of this document and other suspicious things about it had not been enough to prove its falseness, the reference to "the rolle of the blacke mainger" should have been conclusive. The citation of the "blacke mainger," evidently thought by Chatterton to be some dire form of disease, is amusing. Barrett, in a serious note, illustrates it by

quoting Chaucer, "on his skin a mormalle had he & a blacke manger." This misquoted reference is to Chaucer's Cook (Prologue, 386–7). Even without his surgical knowledge, Barrett ought not to have made this ludicrous mistake. After giving a description of the Cook's prowess in his particular business, Chaucer says:

> "But greet harm was it, as it thoughte me,
> That on his shine a mormal hadde he;
> For blankmanger, that made he with the beste."

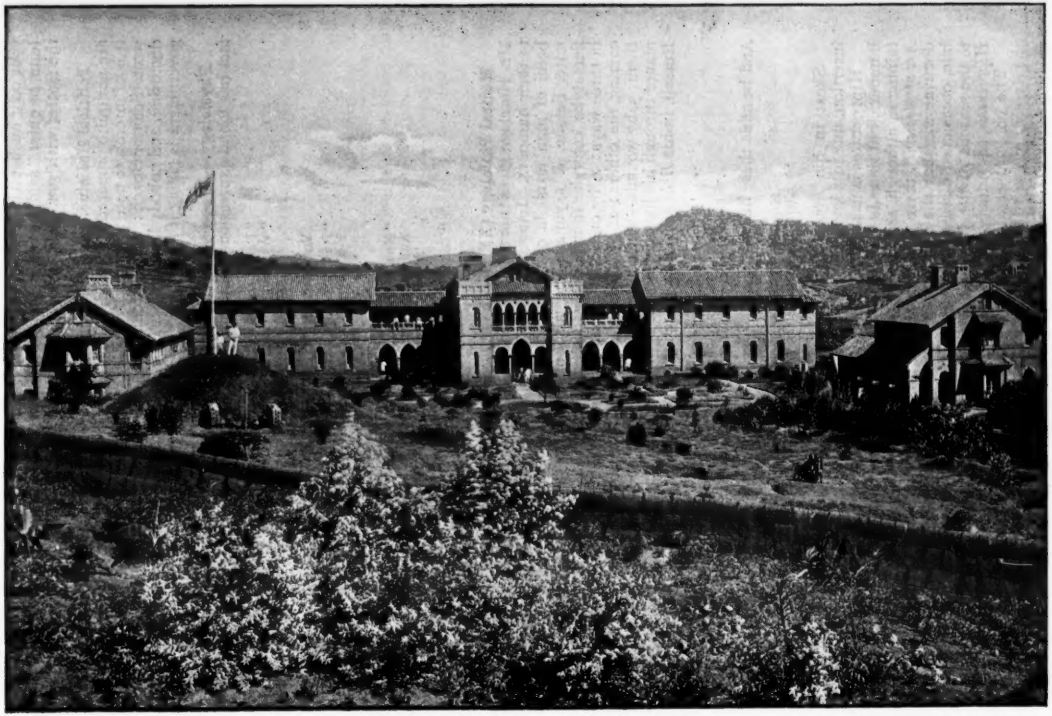
Blankmanger, different in composition from the blancmange of to-day, was a well-known Middle-English dish and is frequently mentioned in contemporary books, in which its ingredients and mode of preparation are given. It appears in the *Catholicon* as "Blawemanger," and several other references to it will be found in Mr. Herrtage's note to it in the Camden Society edition. Were it not that no literary crime can be pardoned we might, for the exquisite drollery of its blunder, be tempted to forgive the Chatterton-Barrett conversion of the appetising "blankmanger" into a disease, "blacke mainger," presumably a sort of "Black Death."

Mormal was well known as a term for an intractable sore and derived its name from *malum mortuum*.

In 1528 the buildings of St. Bartholomew's Priory, which gave Chatterton this splendid opportunity, were transferred to the Mayor and Burgesses for the purposes of a Grammar School founded under a bequest from Robert Thorne. It continued to be used as such till 1769, when an exchange was effected with Queen Elizabeth's Hospital, now better known as the City School, which was then carried on in premises occupying the site of the present Merchant Venturers' College. Queen Elizabeth's Hospital, which had been founded under the will of John Carr in 1586 as a school for boys upon the plan of Christ's Hospital, remained in St. Bartholomew's till 1847, when it was removed to its present fine building on Brandon Hill, In 1879 the Grammar School was removed to the buildings in Tyndall's Park. Some remains of St. Bartholomew's Priory still exist near the bottom of Christmas Steps, and on the western side of the doorway can be seen the mutilated figure of the Virgin and Child.

Medical Missions.—I take the following notes from the November Quarterly Paper of the Edinburgh Medical Missionary Society. When the victorious French troops entered Antananarivo it was thought that the disturbed state of Madagascar would soon be settled. But the whole country, with the exception of the capital and a few garrisoned towns, was in a state of ferment and lawlessness. Two of Madagascar's most devoted missionaries, with their little girl, have been cruelly murdered, and others have had to fly from their stations to save precious life. The flourishing Norwegian Mission Station at Antsirabe, with its medical mission hospital and leper village, have been utterly destroyed. Hundreds of churches have been burnt or razed to the ground, and teachers, evangelists, and pastors hounded from place to place. The medical missionary hospital at Antananarivo[1] is one of the best equipped mission hospitals in the world, though not by any means the largest. It was built chiefly by the Friends' Foreign Mission Association, and is maintained by that mission and the London Missionary Society. On Sept. 30th, 1895, the Capital was attacked, and for some time the hospital was in considerable danger. One shell burst just in front of the hospital, but no one was injured. When the surrender of the town took place the hospital staff were very busy in attending to the wounded, and there the French and Malagasy were first gathered and reconciled under one roof. The French doctors praised the well-trained native nurses highly. Soon after General Duchesne's return to Paris, the French Government granted Miss Byam, the lady superintendent, a medal of honour in acknowledgment of her devotion and help.

[1] The view on the opposite page I owe to the kindness of Dr. Sargood Fry, who will, I am sure, be quite ready to give information about, or receive contributions to, the Edinburgh Medical Missionary Society, of which he is the secretary and superintendent, and whose office is at 56 George Square, Edinburgh.



Doctor's House. **MISSION HOSPITAL AT ANTANANARIVO.** *Lady Superintendent's House.*

Clinical Records (17).—At an East-end Hospital a man was brought in terribly smashed. A new house surgeon having examined him said to his wife, "I fear your poor husband is dead." "No, I ain't," said the supposed corpse. "Hush, John, be quiet," said the wife, "the gentleman must know better than you what 's the matter with you."—*St. Thomas's Hospital Gazette.*

Political Medicine.—As there seems to be some indication that the Venezuelans are not quite prepared to consider that their difficulty with England is ended, it is of interest to note that the *Medical Age* says that "An Up North Democrat wrote Senator Roach: 'All the fools around here are talking about the Munroe doctoring, and nobody knows what it is, and I don't know it myself; but if the government is giving it away send me what you can.'"

Physiology.—In some American papers recently a well-known physiological fact has found expression in the following Rondeau:—

"I can't conceive," she archly cried,
"Wherein you men can longer pride
Yourselves from female rivals free,
For surely we have grown to be
Your peers in ev'ry human stride.

"It is a truth that none dare hide;
Yet why you men will not decide
To recognise the new decree
I can't conceive.

"Now, *entre nous*, won't you confide
And tell me true, all jokes aside,
What difference the world can see
Between your manly self and me?"
"To tell you truly," he replied,
"I can't conceive."

Medical Philology (XX.).—The *Catholicon* has "Coleryke; *colera; colericus.*" Mr. Herrtage gives this note: "Men were divided into four classes, according to their humours. Laurens Andrewe says, in his *Noble Lyfe* [1510], 'And the bodij of man is made of many diuers sortes of lymmes as senewes, vaynes, fatte, flesshe, & skynne. And also of the foure moistours, as sanguyne, flematyke, coleryke & melancoly' (fol. a iv. back. col. 2). Men die, he says, in three ways: 1, by one of the four elements of which they are made, overcoming the others; 2, by *humidum radicale*, or 'naturall moystour,' forsaking them; 3, by wounds—'the coleryke commeth oftentymes to dethe be accedentall maner through his hastines, for he is of nature hot and drye.' So also John Russell, in his *Boke of Nurture* [*c.* 1460] (Babees Boke, p. 53), says:—

'The second course *colericus* by callynge
Fulle of Fyghtynge blasfemynge, & brallynge,
Fallynge at vergaunce with felow and frie.'

And he adds these lines—

Colericus:
Hirsutus, Fallax, irascens, prodigus, satis audax,
Astutus, gracilis, siccus, croceique coloris."

Skeat in his *Etymological Dictionary* says: "The *h* is a 16th century insertion, due to a knowledge of the source of the word."

Hippocrates is usually credited with being the author of the theory of the humours, but there is much doubt about the authenticity of the treatise containing it, although, as Rutherford Russell points out (*History and Heroes of the Art of Medicine*), there is evidence that his practice was affected by it. The doctrine was that the four humours, namely, blood, phlegm, yellow and black bile, occasioned diseases by the prevalence of one or other of them, according to the seasons of the year and other circumstances (see *The Genuine Works of Hippocrates*, ed. Adams, 1849, *passim*).

The choleric were subject to special spiritual temptation if the writer of the *Ayenbite of Inwyt* (1240), referred to by Mr. Herrtage and quoted in the *New English Dictionary*, is to be accepted as an authority. On p. 157 of the Early English Text Society edition of that work it is said that "þe dyevel . . . asayleþ stranglakest . . . þane colrik mid ire and mid discord."

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